MHC-S7AV

HCR-S7AV

SERVICE MANUAL

AEP Model
UK Model
E Model
Australian Model

Ver 1.0 2001.04

- MHC-S7AV is composed of following models.
  As for the service manual, it is issued for each component model, then, please refer to it.

COMPONENT MODEL NAME FOR MHC-S7AV.

	MHC-S7AV
AMPLIFIER	TA-S7AV
CD PLAYER	CDP-S3
TAPE PLAYER	TC-S3
FM STEREO, FM/AM SUPERHETERDYNE TUNER	ST-S5
FRONT SPEAKER	SS-S9
REAR SPEAKER	SS-RS270
CENTER SPEAKER	SS-CT270

•Abbreviation
AUS : Australian model
KR : Korea model
MX : Mexican model

HCR-S7AV is composed of TA-S7AV, CDP-S3, TC-S3, ST-S5, SS-RS270 and SS-CT270.

SPECIFICATIONS

Power requirements
European model: 230 V AC, 50/60 Hz
Australian model: 230 – 240 V AC, 50/60 Hz
Mexican model: 120 V AC, 60 Hz
Korean model: 220 V AC, 60 Hz
Other models: 120 V, 220 V or 230 – 240 V AC, 50/60 Hz
Adjustable with voltage selector

Power consumption
European model: 300 watts
0.6 watts (during Power Saving Mode)
Other models: 300 watts

Dimensions (w/h/d)
TA-S7AV: Approx. 280 × 128 × 350 mm
ST-S5: Approx. 280 × 108 × 340 mm
CDP-S3: Approx. 280 × 108 × 330 mm
TC-S3: Approx. 280 × 128 × 330 mm

Mass
TA-S7AV: Approx. 7.7 kg
ST-S5: Approx. 2.1 kg
CDP-S3: Approx. 2.7 kg
TC-S3: Approx. 2.4 kg

Supplied accessories: AM loop antenna (1)
FM lead antenna (1)
Remote commander (1)
Batteries (2)
Speaker cords (5)
Optical cable (1)
Center and rear speaker pads (12)

Design and specifications are subject to change without notice.

PARTS LIST

Part No.	Description	Remark
	ACCESSORIES & PACKING MATERIALS	
	**********	
1-476-530-11	COMMANDER, STANDARD (RM-SR370AV)	
1-501-374-11	ANTENNA, LOOP	
1-501-659-71	ANTENNA (FM) (AUS, MX)	
1-501-721-11	ANTENNA (LOOP)	
1-501-804-11	ANTENNA (FM) (AEP, UK, KR)	
1-574-264-11	CORD, LIGHT PLUG (OPTICAL)	
1-769-306-11	CORD, SPEAKER (1.5m) (for SS-S9)	
1-769-433-11	CORD, SPEAKER (10m) (for SS-RS270)	
1-769-433-21	CORD, SPEAKER (2.5m) (for SS-CT270)	
4-210-254-01	CUSHION (FOOT) (for SS-CT270/RS270)	
4-233-737-11	MANUAL, INSTRUCTION (ENGLISH) (AEP, UK, AUS)	
4-233-737-21	MANUAL, INSTRUCTION (FRENCH) (AEP)	
4-233-737-31	MANUAL, INSTRUCTION (SPANISH) (AEP, MX)	
4-233-737-41	MANUAL, INSTRUCTION (GERMAN, DUTCH, ITALIAN)	(AEP)
4-233-737-51	MANUAL, INSTRUCTION (SWEDISH) (AEP)	
4-233-737-81	MANUAL, INSTRUCTION (KOREAN) (KR)	
4-233-745-11	MANUAL, INSTRUCTION (DANISH, FINNISH) (AEP)	
4-233-745-21	MANUAL, INSTRUCTION (PORTUGUESE) (AEP)	
4-233-745-31	MANUAL, INSTRUCTION (RUSSIAN) (AEP)	
4-233-745-41	MANUAL, INSTRUCTION (GREEK) (AEP)	
4-233-745-51	MANUAL, INSTRUCTION (HUNGARIAN, CZECH) (AEP)	
4-233-745-61	MANUAL, INSTRUCTION (TURKISH) (AEP)	
4-233-745-71	MANUAL, INSTRUCTION (SLOVAKIAN) (AEP)	
4-981-643-21	COVER, BATTERY (for RM-SR370AV)	

MINI HiFi COMPONENT SYSTEM

9-873-830-11
2001D0500-1
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Sony Corporation
Audio Entertainment Group
General Engineering Dept.

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REVISION HISTORY

Clicking the version allows you to jump to the revised page.
Also, clicking the version at the upper right on the revised page allows you to jump to the next revised page.

Ver.	Date	Description of Revision
1.0	2001.04	New

CDP-S3

SERVICE MANUAL

AEP Model
UK Model
E Model
Australian Model

Ver 1.0 2001.04

CDP-S3 is the CD player section in MHC-S7AV or MHC-S3.

Model Name Using Similar Mechanism	NEW
CD Mechanism Type	CDM63B-30BD60
Base Unit Name	BU-30BD60
Optical Pick-up Name	OP Assy (A-MAX.3)

SPECIFICATIONS

System	Compact disc and digital audio system
Laser	Semiconductor laser (λ=780 nm) Emission duration: continuous
Frequency response	2 Hz – 20 kHz (±0.5 dB)
Signal-to-noise ratio	More than 90 dB
Dynamic range	More than 90 dB
OPTICAL OUT (Square optical connector jack, rear panel)	
Dimensions (w/h/d)	Approx. 280 x 108 x 330 mm
Mass	Approx. 2.7 kg

Design and specifications are subject to change without notice.

COMPACT DISC PLAYER

9-873-831-11
2001D0500-1
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Home Audio Company
Shinagawa Tec Service Manual Production Group

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NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic break-down because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.
During repair, pay attention to electrostatic break-down and also use the procedure in the printed matter which is included in the repair parts.
The flexible board is easily damaged and should be handled with care.

NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe from more than 30 cm away from the objective lens.

LASER DIODE AND FOCUS SEARCH OPERATION CHECK

Carry out the “S curve check” in “CD section adjustment” and check that the S curve waveforms is output three times.

Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

Flexible Circuit Board Repairing

- Keep the temperature of the soldering iron around 270 ˚C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board. (within 3 times)
- Be careful not to apply force on the conductor when soldering or unsoldering.

CAUTION
Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

This appliance is classified as a CLASS 1 LASER product. The CLASS 1 LASER PRODUCT MARKING is located on the rear exterior.

Laser component in this product is capable of emitting radiation exceeding the limit for Class 1.

The following caution label is located inside the unit.

CAUTION : INVISIBLE LASER RADIATION WHEN OPEN AND INTERLOCKS DEFEATED. AVOID EXPOSURE TO BEAM.
ADVARSEL : USYNLIG LASERSTRÅLING VED ÅBNING NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION. UNDGÅ UDSAETTELSE FOR STRÅLING.
VORSICHT : UNSICHTBARE LASERSTRAHLUNG. WENN ABDECKUNG GEÖFFNET UND SICHEREITSVERRIEGELUNG ÜBERBRÜCKT. NICHT DEM STRAHL AUSSETZEN.
VARO! : AVATTAESSA JA SUOJALUKITUS OHITETTAESSA OLET ALTTIINA NÄKYMÄTTÖMÄLLE LASERSÄTEILYLLE. ÄLÄ KATSO SÄTEESEEN.
VARNING : OSYNLING LASERSTRÅLING NÄR DENNA DEL ÄR ÖPPNAD OCH SPÄRREN ÄR URKOPPLAD. BETRAKTA EJ STRÅLEN.
ADVERSEL : USYNLIG LASERSTRÅLING NÅR DEKSEL ÅPNES OG SIKKERHEDSLÅS BRYTES. UNNGÅ EKSPONERING FOR STRÅLEN.
VIGYAZAT! : A BURKOLAT NYITÁSAKOR LÁTHATATLAN LÉZERSUGÁRVESZÉLY! KERÜLJE A BESUGÁRZÁST!

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

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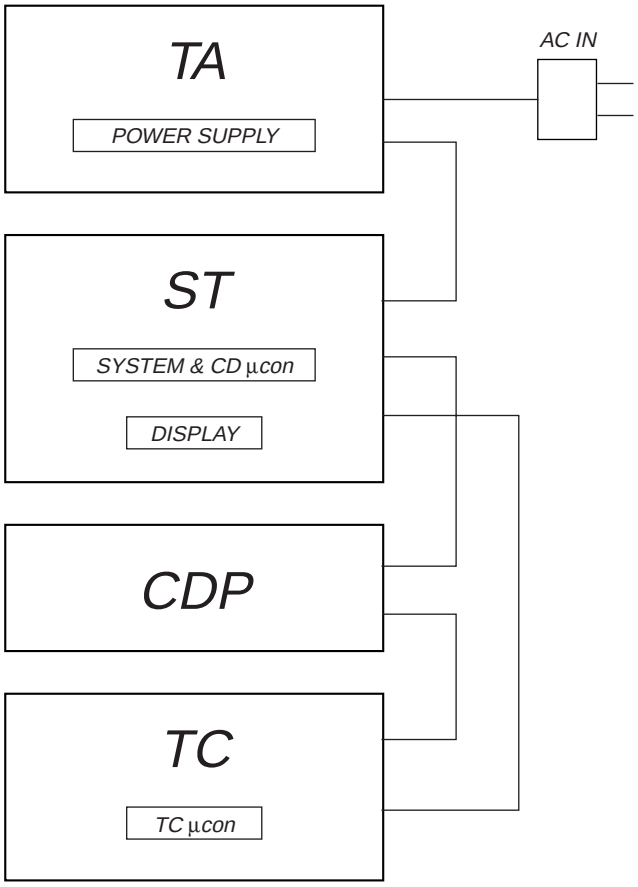
SECTION 1
SERVICING NOTES

This set is a component of the MHC-S7AV or MHC-S3.
The MHC-S7AV or MHC-S3 system configuration is as shown below, and therefore it does not operate normally unless all four components are connected.
In performing the repair, connect all components with the system cables.
Note: The precaution to the users is described on the label stuck on the back panel (CD player) and in the troubleshooting section in the Operation Manual.

System Configuration:



CD-TEXT TEST DISC

This unit is able to display the test data (character information) written in the CD on its fluorescent indicator tube.
The CD-TEXT TEST DISC (TGCS-313:4-989-366-01) is used for checking the display.
To check, perform the following procedure.

Checking Method:

1. Press the I/⏻ button to turn the power on, set the disc to the disc table with the "test disc" label facing up, and chuck the disc.
2. Press the CD button to set CD function, and press the ◄◄ ►► button to playback the disc.
3. The following will be displayed on the liquid crystal display.
   Display : 1KHZ/0DB/L R
4. Pressing the –⏮ or ⏭+ button, select the track. The text data of each track will be displayed.
   For details of the displayed contents for each track, refer to "Table 1 : CD-TEXT TEST DISC TEXT Data Contents".

Restrictions in CD-TEXT Display

In this unit, some special characters will not be displayed properly. These will be displayed as a space or a character resembling it.

Table 1 : CD-TEXT TEST DISC TEXT Data Contents (TRACKS No. 1 to 20:Normal Characters)

TRACK No.	Displayed Contents
1	1kHz/0dB/L&R
2	20Hz/0dB/L&R
3	40Hz/0dB/L&R
4	100Hz/0dB/L&R
5	200Hz/0dB/L&R
6	500Hz/0dB/L&R
7	1kHz/0dB/L&R
8	5kHz/0dB/L&R
9	7kHz/0dB/L&R
10	10kHz/0dB/L&R
11	16kHz/0dB/L&R
12	18kHz/0dB/L&R
13	20kHz/0dB/L&R
14	1kHz/0dB/L&R
15	1kHz/–1dB/L&R
16	1kHz/–3dB/L&R
17	1kHz/–6dB/L&R
18	1kHz/–10dB/L&R
19	1kHz/–20dB/L&R
20	1kHz/–60dB/L&R

Note: Track No. 21 to 99 are not displayed.

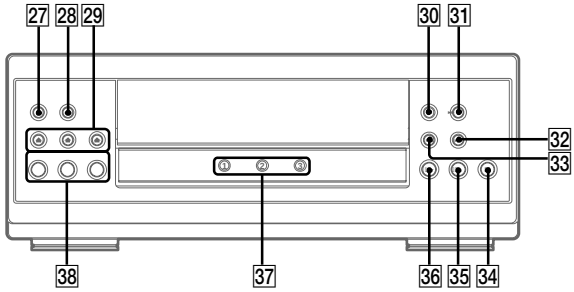
SECTION 2
GENERAL

This section is extracted from instruction manual.

Parts Identification

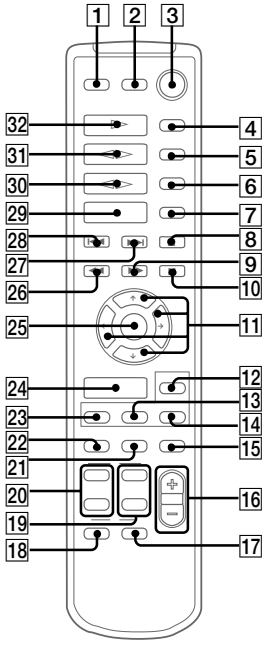
The items are arranged in alphabetical order.
Refer to the pages indicated in parentheses ( ) for details.

Main unit



DISC 1–3 38 (14, 15, 21)
DISC 1–3 indicators 37
DISC 1–3 ⏏ (eject) 29 (14)
PLAY MODE 27 (14, 15, 21)
REPEAT 28 (14)
► (play) 36 (14, 15)
❚❚ (pause) 35 (14)
■ (stop) 34 (14, 20)
⏮ (go back) 33 (14, 15, 21)
⏭ (go forward) 32 (14, 15, 21)
◀◀ (rewind) 30 (14)
▶▶ (fast forward) 31 (14)

Remote Control



CD ▻ 32 (14, 15)
CHECK 5 (15)
CLEAR 6 (15)
CLOCK/TIMER SELECT 17 (30)
CLOCK/TIMER SET 18 (13, 21, 29)
DBFB 15 (23)
DISPLAY 22 (13, 16, 18, 29, 35)
D.SKIP 4 (14)
ENTER 25 (10, 12, 13, 15, 17, 18, 21, 22, 26–30)
EQ 13 (27)
EQ ON/OFF 14 (10, 28)
FUNCTION 24 (10, 14, 15, 20, 21, 31)
GROOVE 21 (23)
SET UP 12 (10, 12, 26, 28, 29)
SLEEP 7 (29)
SUR 23 (25)
TAPE A ◅▻ 31 (19, 35)
TAPE B ◅▻ 30 (19, 20, 35)
TUNER/BAND 29 (17)
TUNING + 9 (17)
TUNING – 26 (17)
TV CH +/– 19
TV VOL +/– 20
TV I/⏻ 2
TV/VIDEO 1
VOL +/– 16

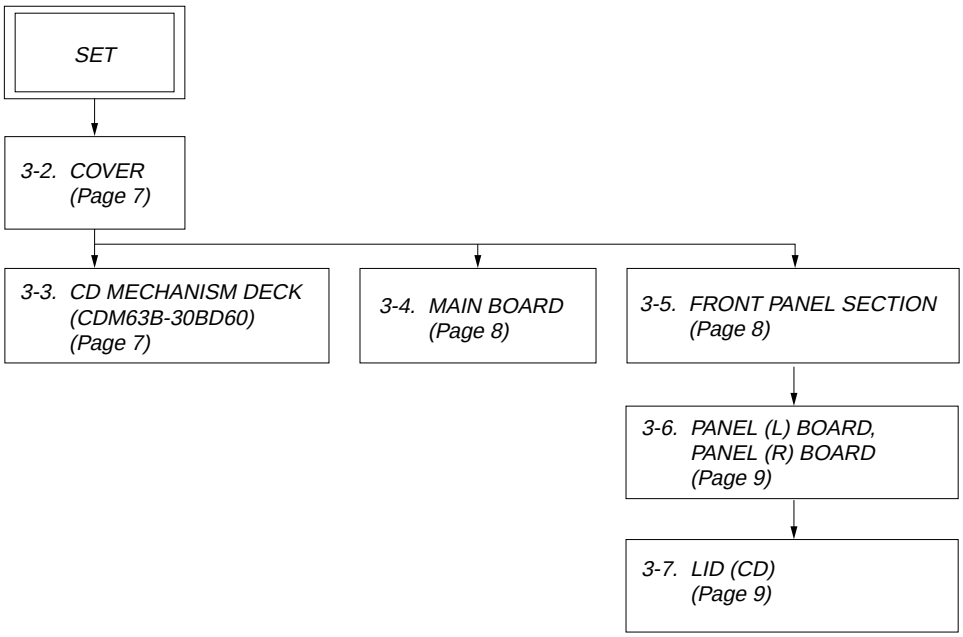
BUTTON DESCRIPTIONS

I/⏻ (power) 3
❚❚ (pause) 10
■ (stop) 8
⏮ (go back) 28
⏭ (go forward) 27
◀◀ (rewind) 26
▶▶ (fast forward) 9
↑/↓/←/→ 11

SECTION 3
DISASSEMBLY

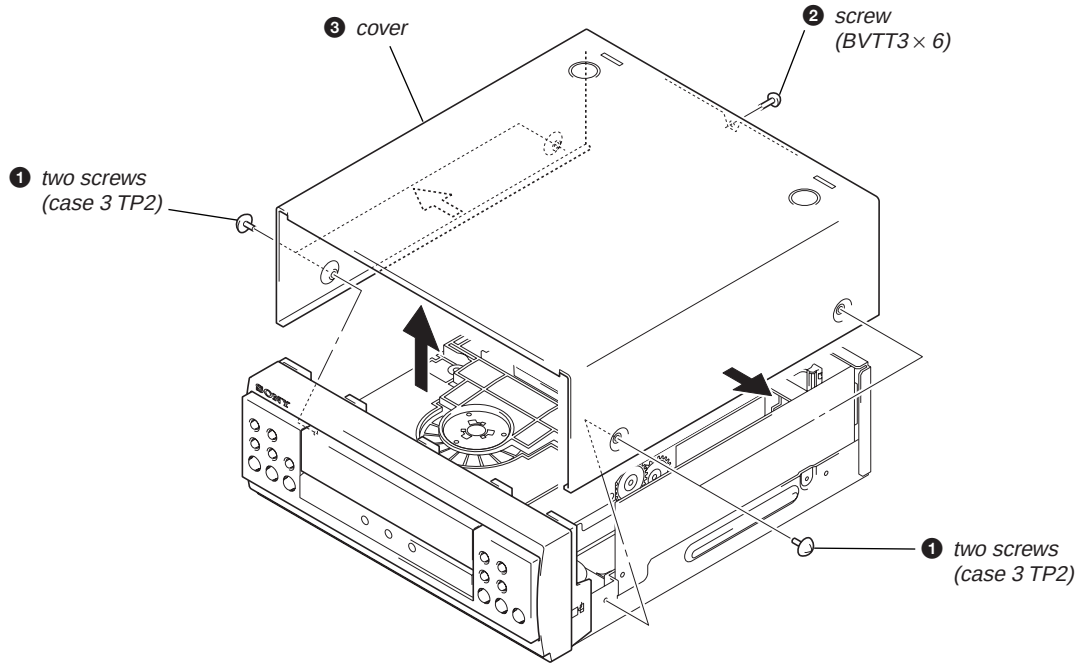
• This set can be disassembled in the order shown below.

3-1. DISASSEMBLY FLOW

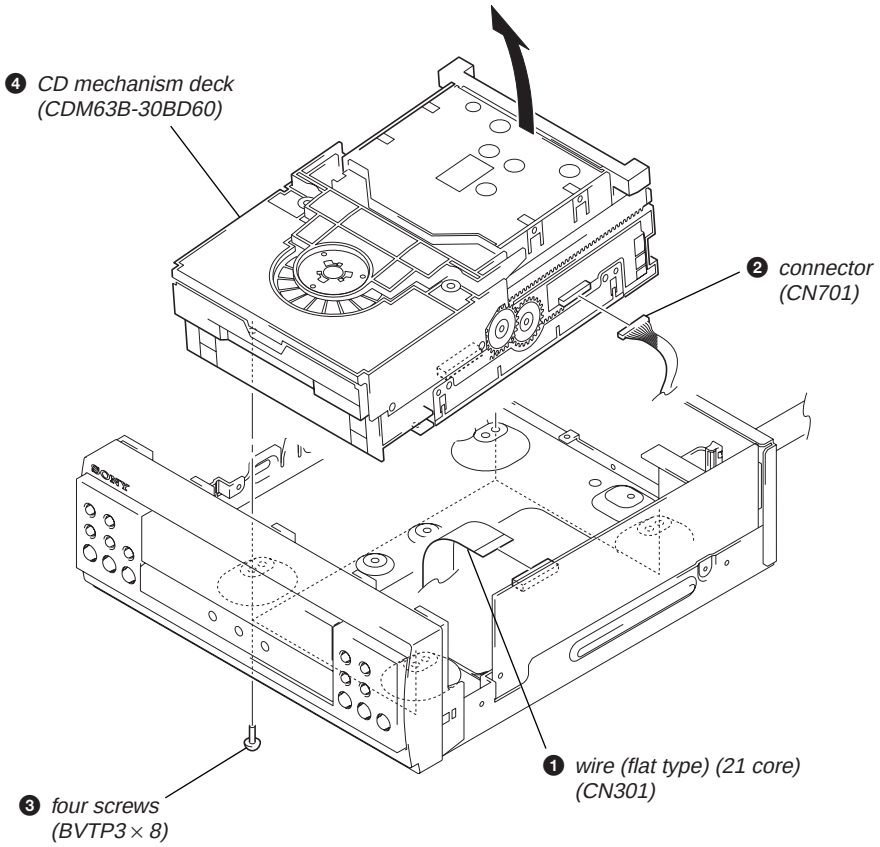


Note: Follow the disassembly procedure in the numerical order given.

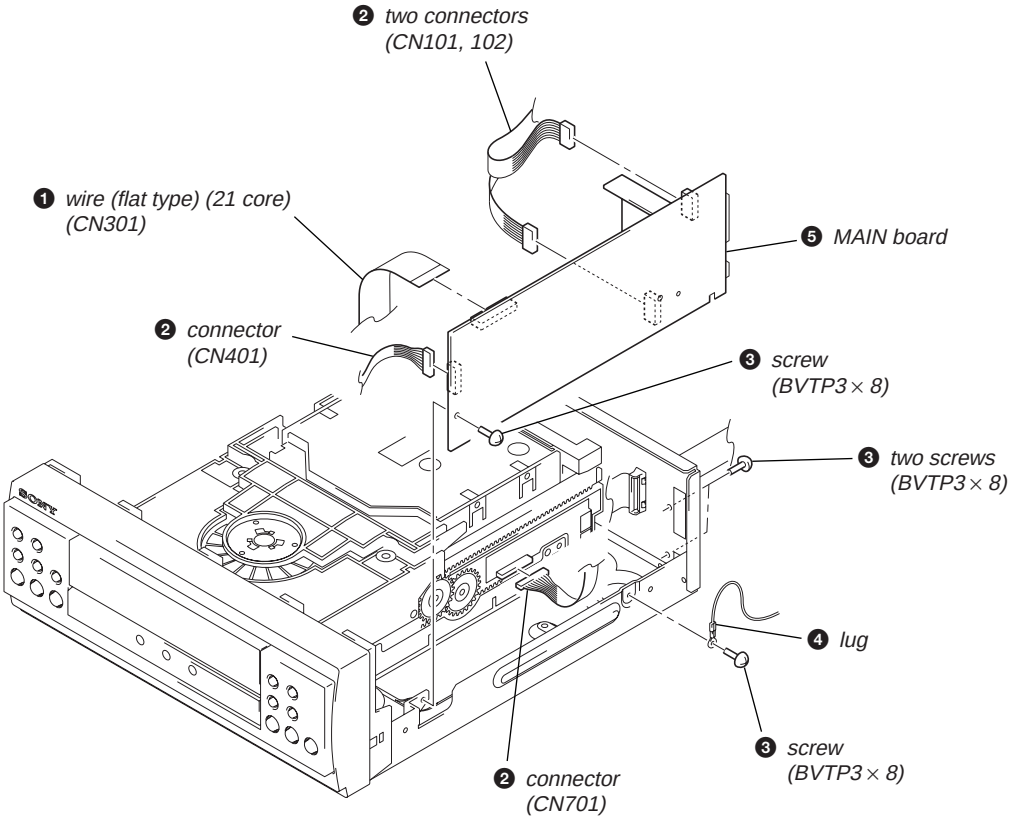
3-2. COVER



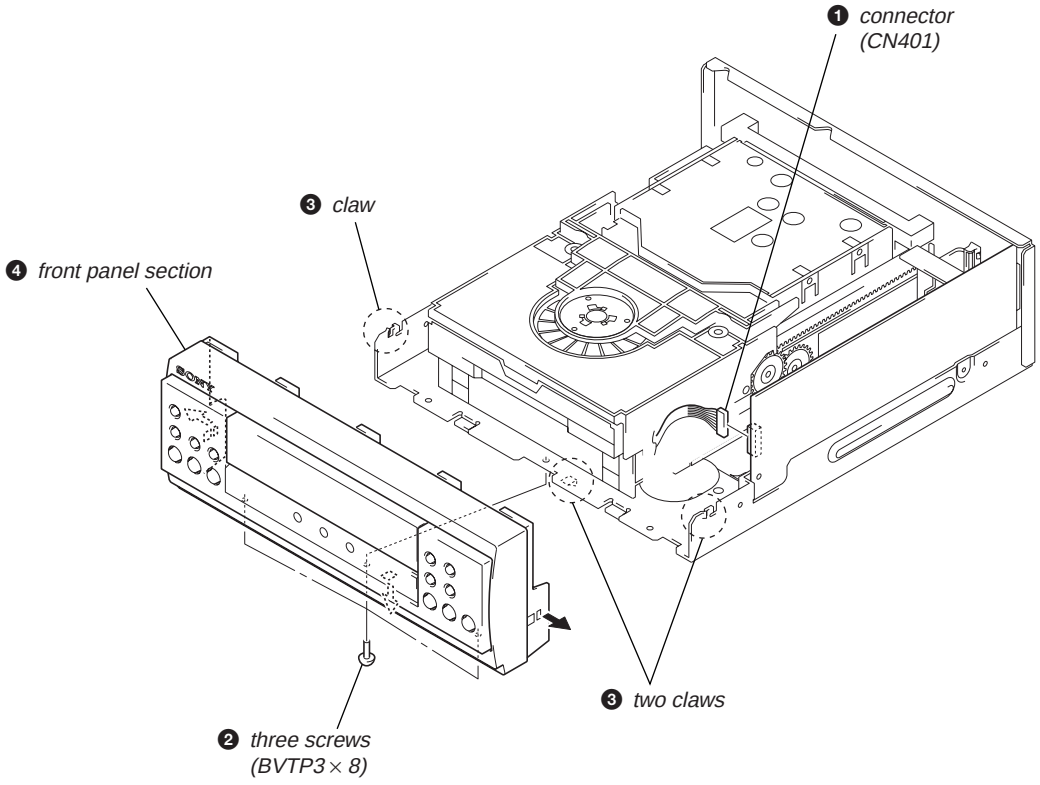
3-3. CD MECHANISM DECK (CDM63B-30BD60)



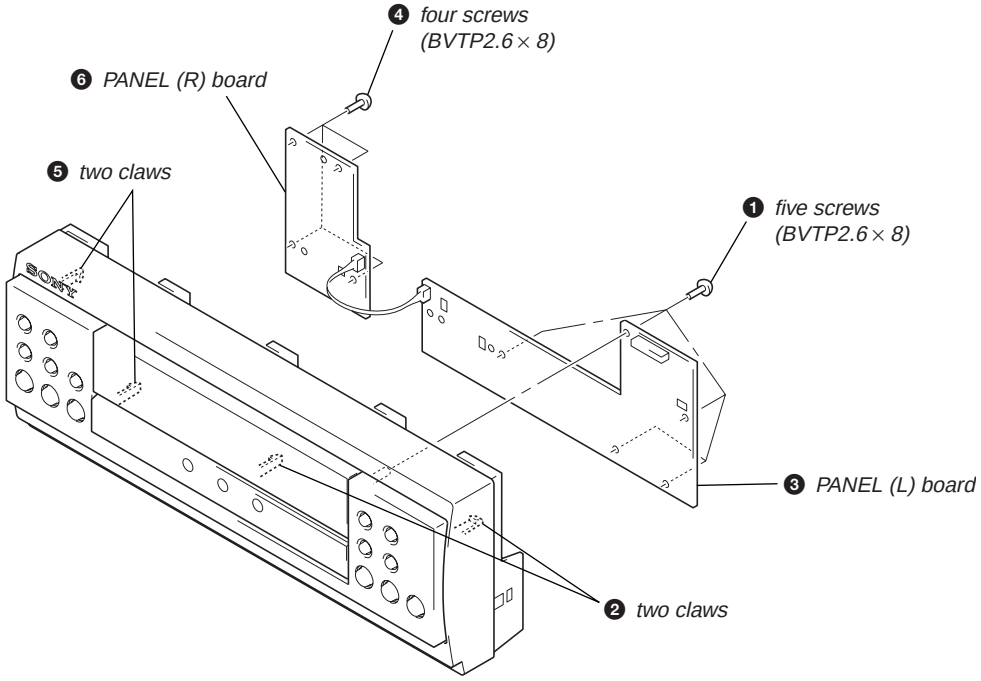
3-4. MAIN BOARD



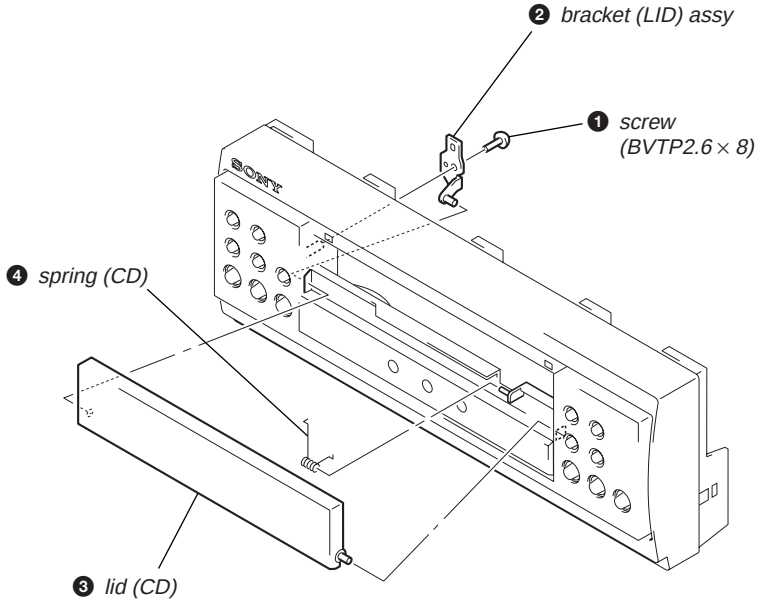
3-5. FRONT PANEL SECTION



3-6. PANEL (L) BOARD, PANEL (R) BOARD



3-7. LID (CD)



SECTION 4
TEST MODE

Note: Use flowing buttons in the test mode.
no mark : Button of CD unit (CDP-S3)
*1 : Button of amplifier unit (TA-S7AV or TA-S3)
*2 : Button of tuner unit (ST-S5 or ST-S3)

[CD Delivery Mode]

- This mode moves the optical pick-up to the position durable to vibration. Use this mode when returning the set to the customer after repair.

Procedure:

1. Press the I/⏻ *1 button to turn the power on.
2. Turn the FILE SELECT *1 knob to set the CD function.
3. While pressing the EQ ON/OFF *1 button, press the I/⏻ *1 button.
4. The message "LOCK" is displayed on the fluorescent indicator tube of tuner unit and turn the power off automatically, and the CD delivery mode is set.

[GC Test Mode]
Enter the GC Test Mode

Procedure 1:

1. Press the I/⏻ *1 button to turn the power on.
2. While pressing the both PLAY MODE and ■ buttons, press the ⏏ (DISC 1) button.
3. LEDs and fluorescent indicator tube are all turned on of all units.

Procedure 2:

1. Press the I/⏻ *1 button to turn the power on.
2. While pressing the both STEREO/MONO *2 and CINEMA STUDIO C *1 buttons, press the CLOCK/TIMER *2 button.
3. LEDs and fluorescent indicator tube are all turned on of all units.

Version Display Mode

Procedure:

1. Enter the GC test mode.
2. Each time the DISC 1 or TUNER MEMORY *2 button is pressed, microcomputer or mechanism deck version is displayed of each unit.
3. Press the DISC 3 or TUNING + *2 button to detail is displayed the version.

Key Check Mode

Procedure:

1. Enter the GC test mode.
2. Press the DISC 2 or TUNING – *2 button to set the key check mode, and displays "K 0 J 0 V 0" on the fluorescent indicator tube of tuner unit.
3. All buttons are pressed of CD unit, all LEDs are blinking of CD unit. (not change the display of fluorescent indicator tube)

Releasing the GC Test Mode

To release from this mode, press three buttons in the same manner as entering this mode or disconnect the power cord.

[CD Service Mode]

- This mode can run the CD sled motor optionally. Use this mode, for instance, when cleaning the optical pick-up.

Procedure:

1. Press the I/⏻ *1 button to turn the power on.
2. Turn the FILE SELECT *1 knob to set the CD function.
3. While pressing the both PLAY MODE and ■ buttons, press the ⏮ button.
4. Set to the CD service mode.
5. With the CD in stop status, press the ⏩ button to move the optical pick-up to outside track, or press the ⏪ button to inside track.
6. To release from this mode, perform as follows.
   1) Move the optical pick-up to the most inside track.
   2) Disconnect the power cord.

Notes:
- Always move the optical pick-up to most inside track when releasing from this mode. Otherwise, a disc will not be unloaded.
- Do not run the sled motor excessively, otherwise the gear can be chipped.

[CD Cancellation Mode of Repeat Limitation]

- This mode can cancel the CD repeat limitation (5 times).

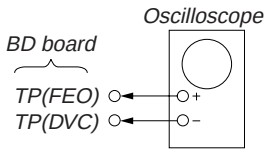
Procedure:

1. Press the I/⏻ *1 button to turn the power on.
2. Turn the FILE SELECT *1 knob to set the CD function.
3. While pressing the both PLAY MODE and ■ buttons, press the REPEAT button.
4. CD repeat limitation is canceled.
5. To release this mode, disconnect the power cord.

SECTION 5
ELECTRICAL ADJUSTMENTS

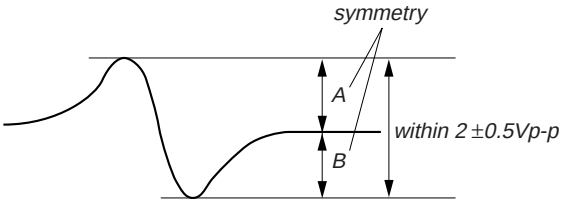
Note :
1. CD Block is basically designed to operate without adjustment. Therefore, check each item in order given.
2. Use LUV-P01 (4-999-032-01) unless otherwise indicated.
3. Use an oscilloscope with more than 10MΩ impedance.
4. Clean the object lens by an applicator with neutral detergent when the signal level is low than specified value with the following checks.

S-Curve Check



Procedure :
1. Connect an oscilloscope to TP (FEO).
2. Connect between TP (FEI) and TP (DVC) (≒1.65 V) by lead wire.
3. Turn Power switch on.
4. Load a disc (LUV-P01) and actuate the focus search. (In consequence of open and close the disc tray, actuate the focus search)
5. Confirm that the oscilloscope waveform (S-curve) is symmetrical between A and B. And confirm peak to peak level within 2 ± 0.5 Vp-p.

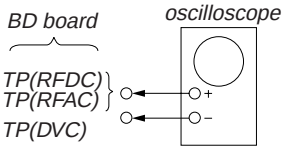
S-curve waveform



6. After check, remove the lead wire connected in step 2.

Note :
- Try to measure several times to make sure than the ratio of A : B or B : A is more than 10 : 7.
- Take sweep time as long as possible and light up the brightness to obtain best waveform.

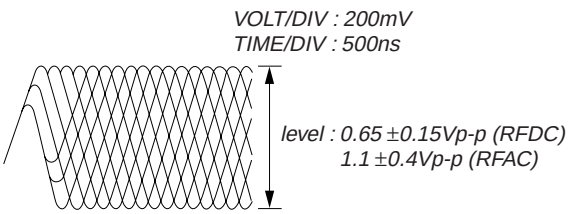
RF Level Check



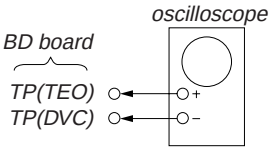
Procedure :
1. Connect an oscilloscope CH1 to TP (RFDC) and CH2 to TP (RFAC).
2. Turn Power switch on.
3. Load a disc (LUV-P01) and playback.
4. Confirm that oscilloscope waveform is clear and check if RF signal level is correct or not.

Note : Clear RF signal waveform means that the shape " ◊ " can be clearly distinguished at the center of the waveform.

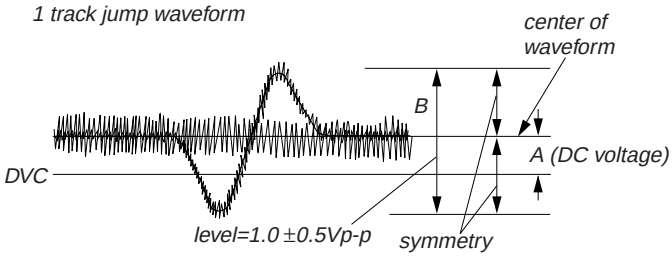
RF signal waveform



E-F Balance (1 Track jump) Check



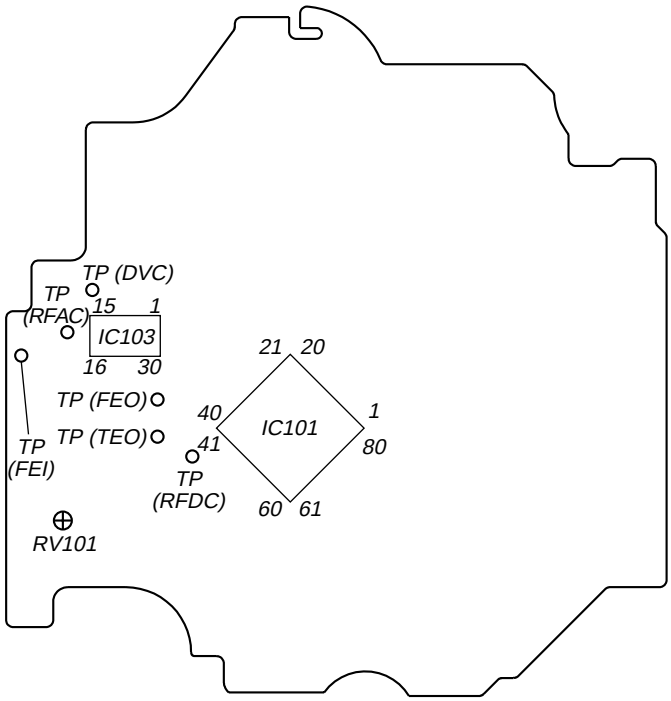
Procedure :
1. Connect an oscilloscope to TP (TEO) and TP (DVC).
2. Turn Power switch on.
3. Load a disc (LUV-P01) and playback the number nine track.
4. Press the ► button. (Becomes the 1 track jump mode.)
5. Confirm that the level B and A (DC voltage) on the oscilloscope waveform.



6. Adjust RV101 on the BD board so that the center of waveform becomes the same voltage of DVC. (i.e. A=0V)

Adjustment Location:

[BD BOARD] (Conductor Side)

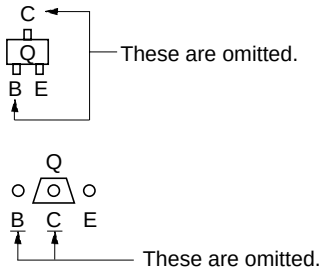


SECTION 6
DIAGRAMS

6-1. NOTE FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS (In addition to this, the necessary note is printed in each block)

Note on Printed Wiring Boards:

- ○——— : parts extracted from the component side.
- ——— : parts extracted from the conductor side.
- △ : internal component.
- ▬ : Pattern from the side which enables seeing.
- Indication of transistor.



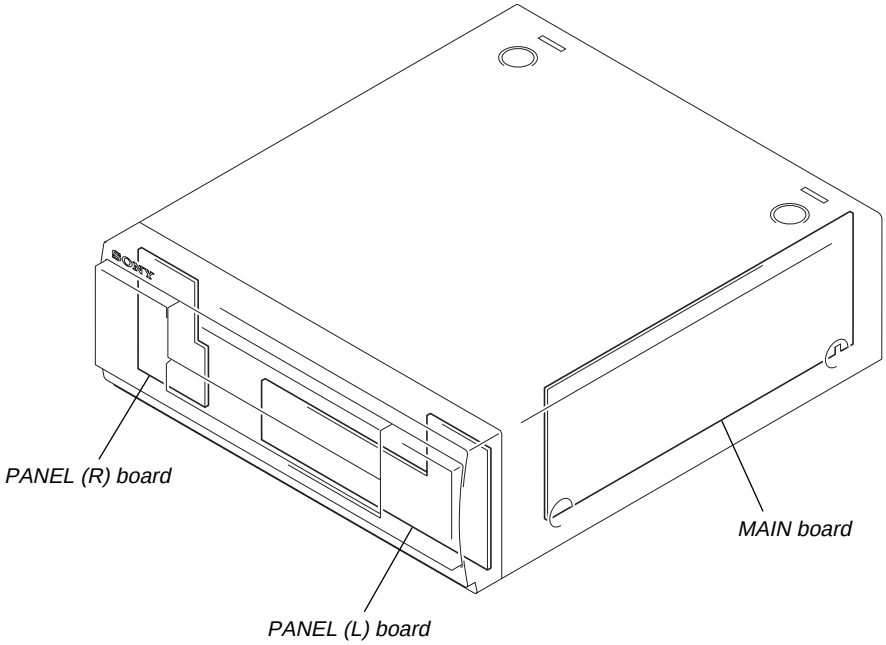
Note on Schematic Diagram:

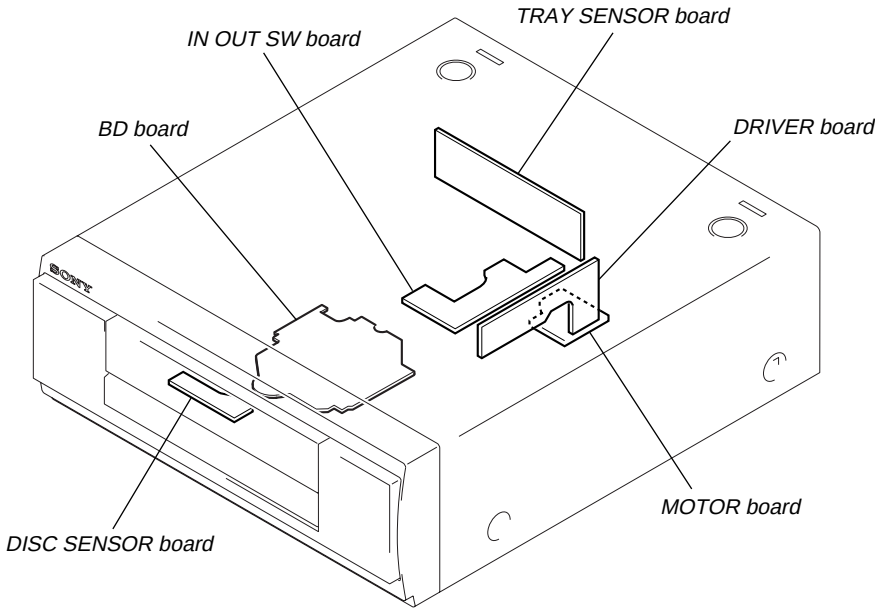
- All capacitors are in µF unless otherwise noted. pF: µµF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- △ : internal component.
- ▭ : panel designation.

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

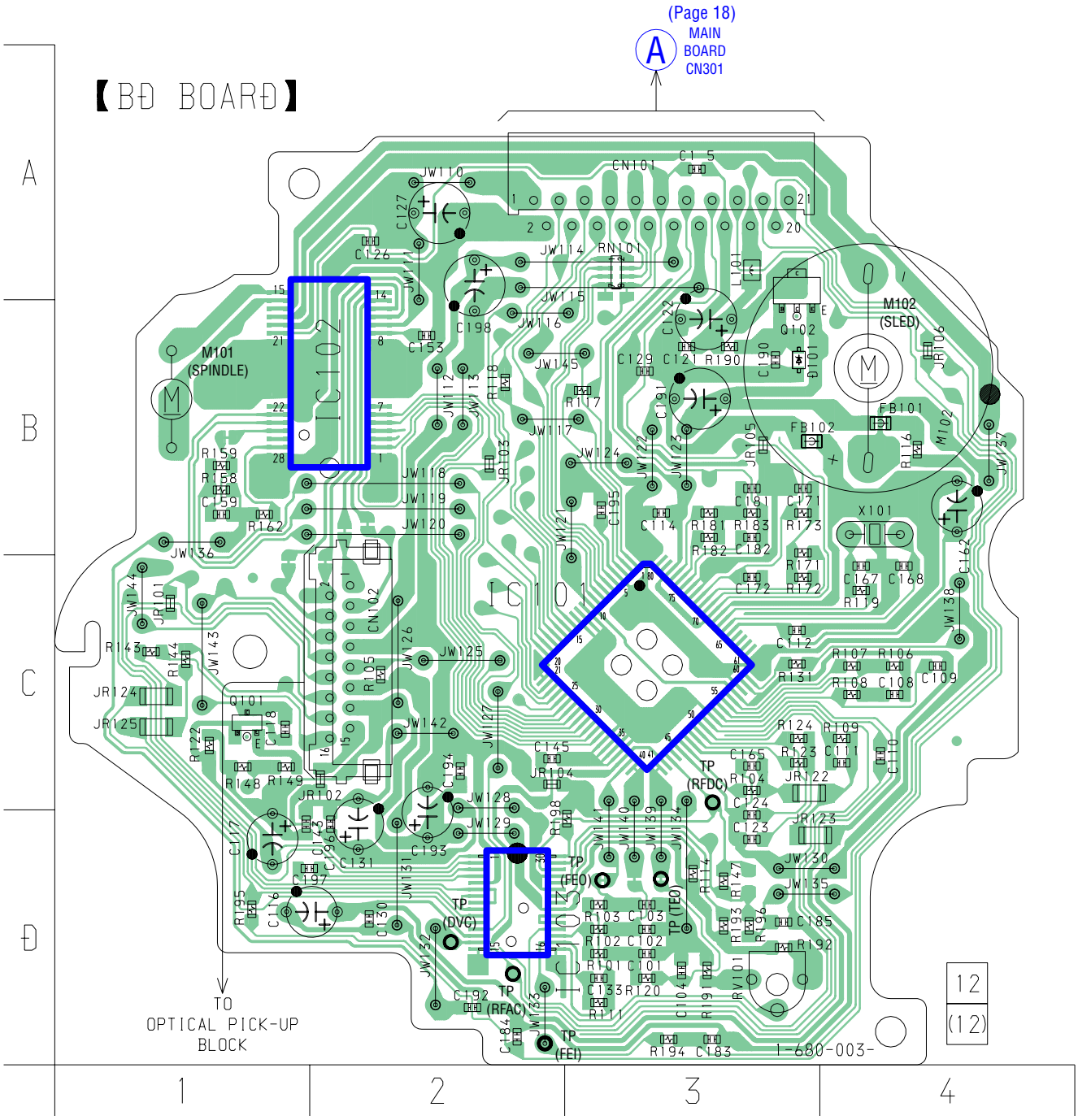
- ▬ : B+ Line.
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ⇨ : CD PLAY

- **Circuit Boards Location**





6-2. PRINTED WIRING BOARD – BD Section – • See page 13 for Circuit Boards Location.



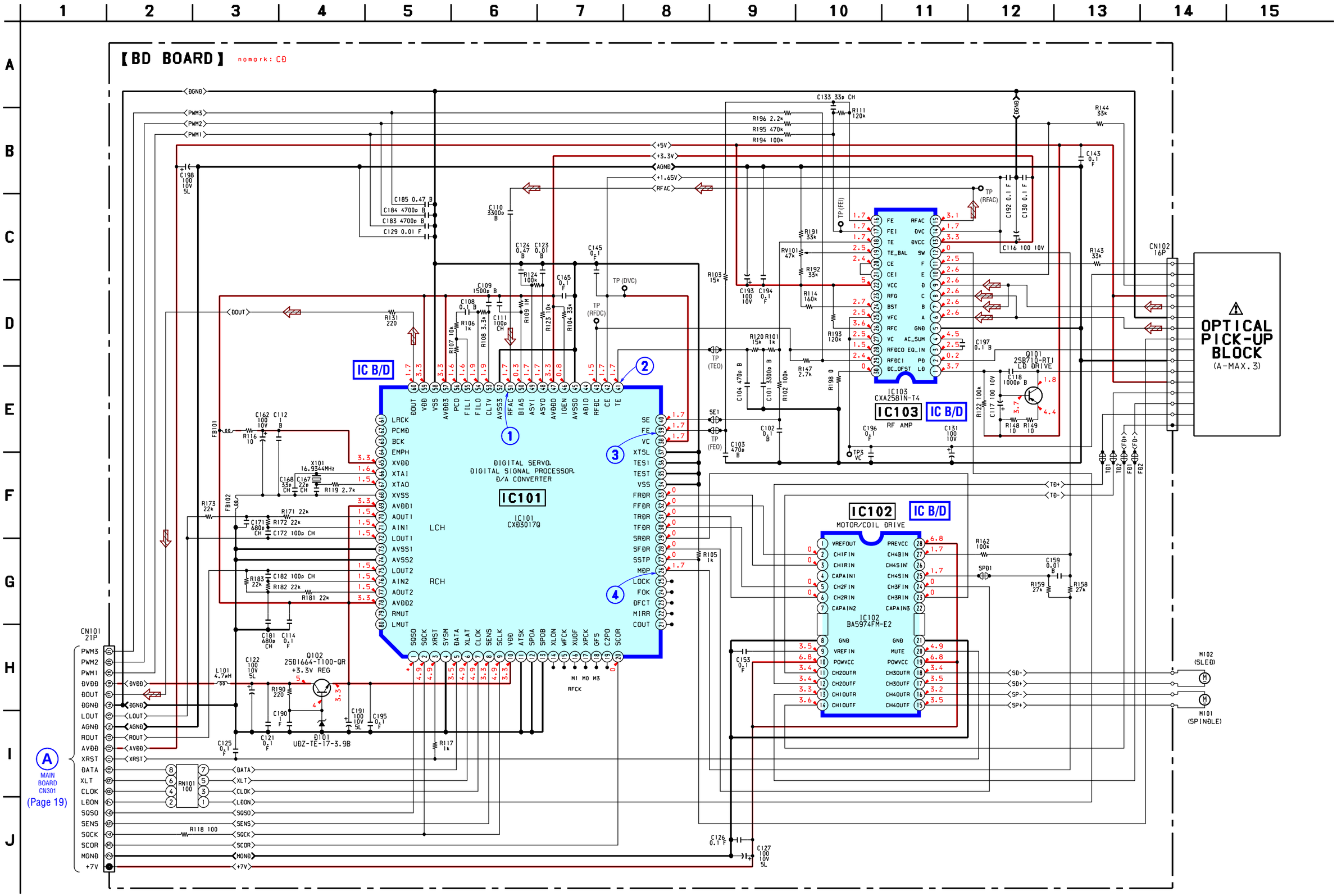
- **Semiconductor Location**

Ref. No.	Location
D101	B-3
IC101	C-3
IC102	B-2
IC103	D-2
Q101	C-1
Q102	A-3

There are a few cases that the part printed on this diagram isn't mounted in this model.

6-3. SCHEMATIC DIAGRAM – BD Section –

• See page 22 for Waveforms. • See page 22 for IC Block Diagrams.

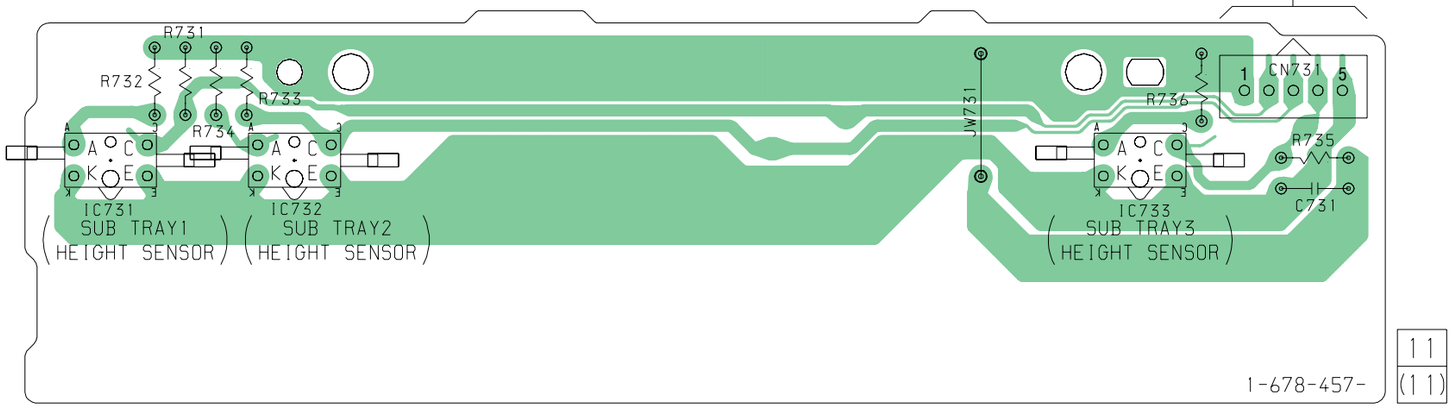


Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

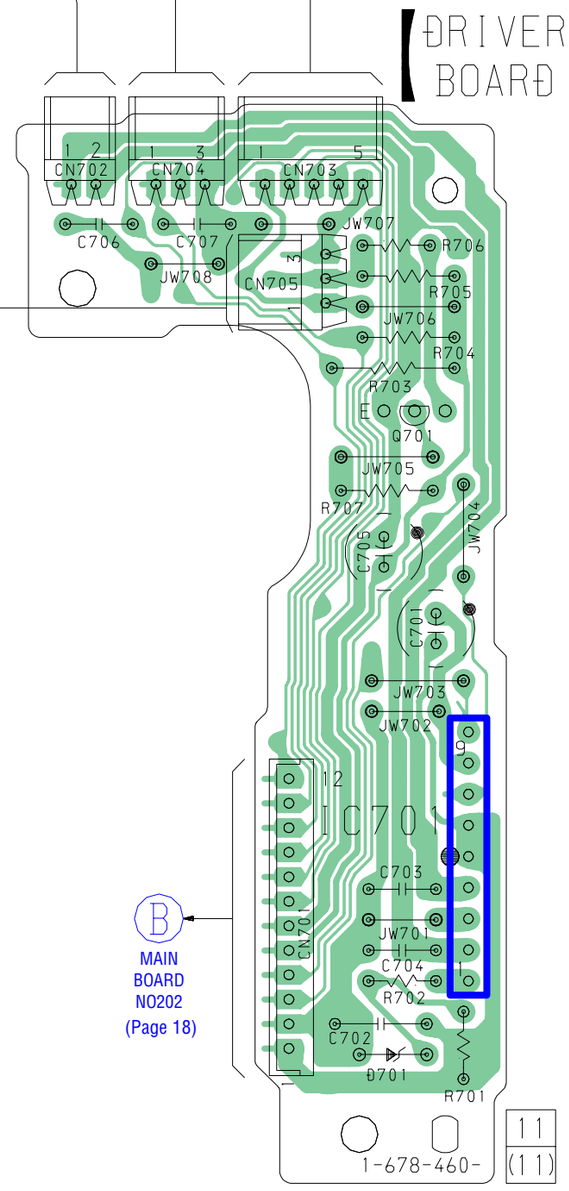
- Voltages and waveforms are dc with respect to ground under no-signal conditions.
no mark : CD PLAY

6-4. PRINTED WIRING BOARDS – CD CHANGER Section – • See page 13 for Circuit Boards Location.

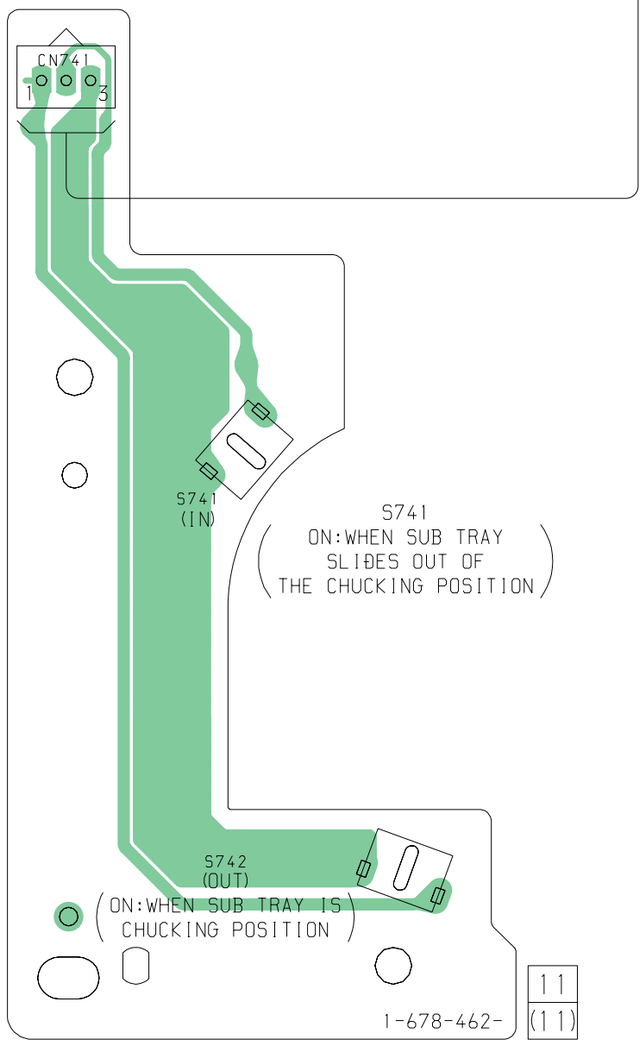
【TRAY SENSOR BOARD】



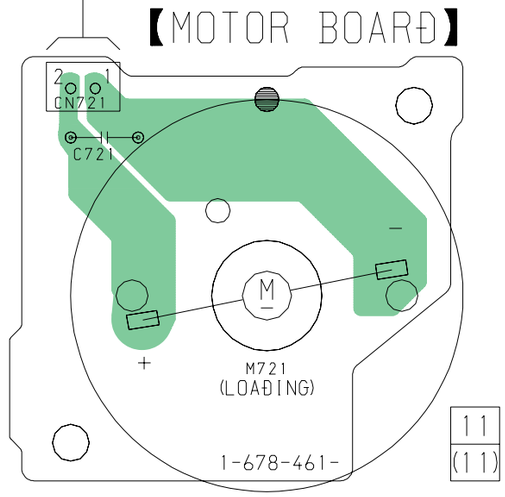
【DRIVER BOARD】



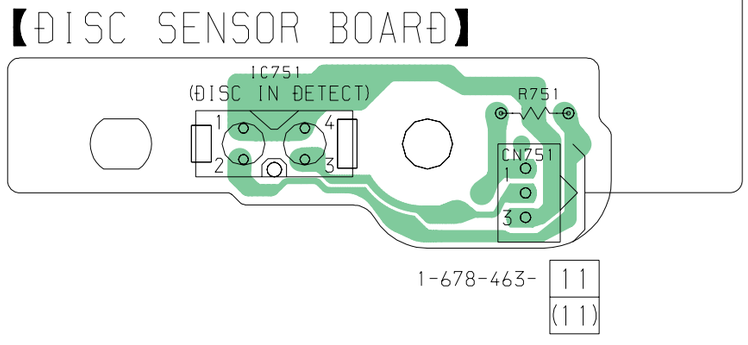
【IN OUT SW BOARD】



【MOTOR BOARD】



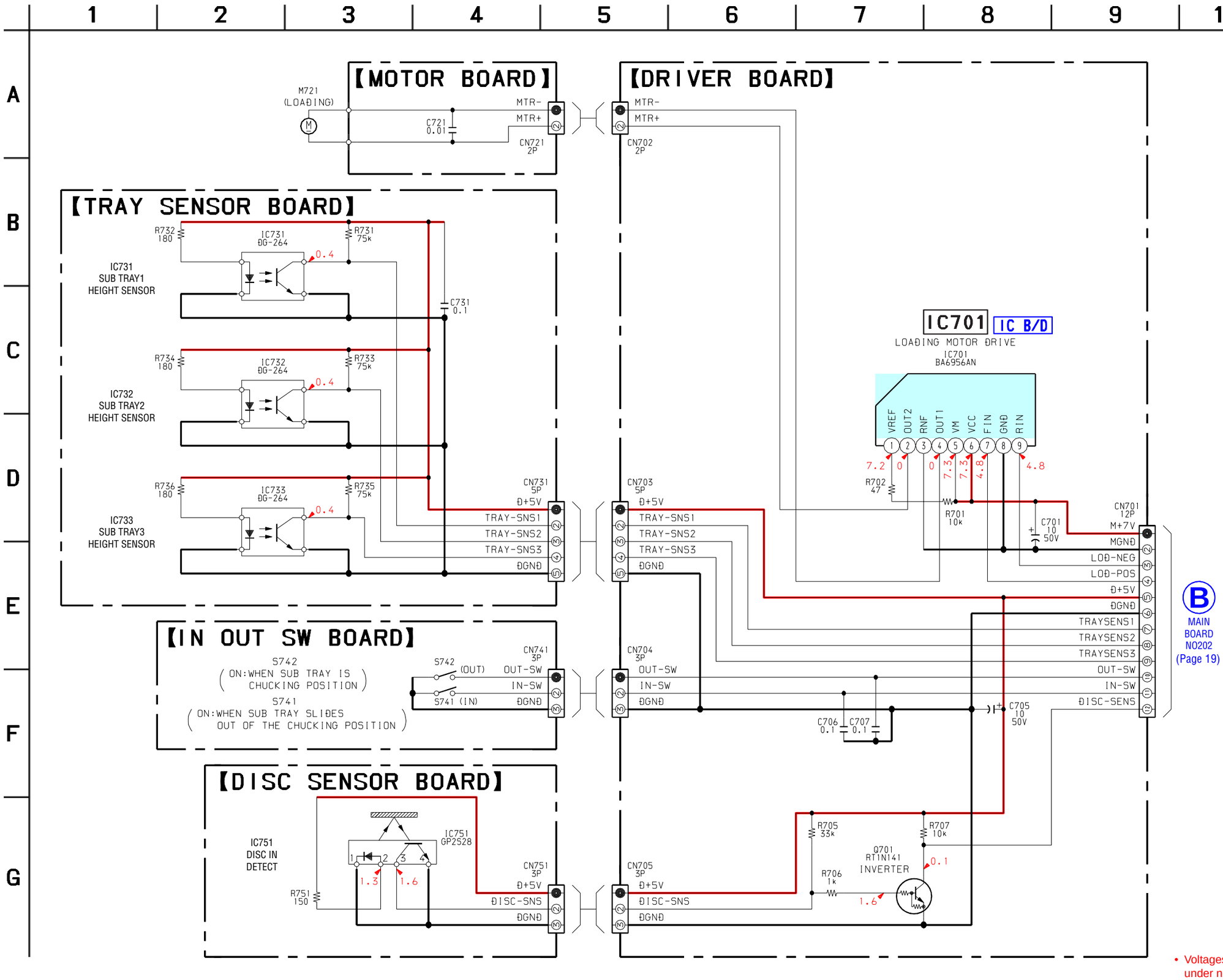
【DISC SENSOR BOARD】



B
MAIN
BOARD
NO202
(Page 18)

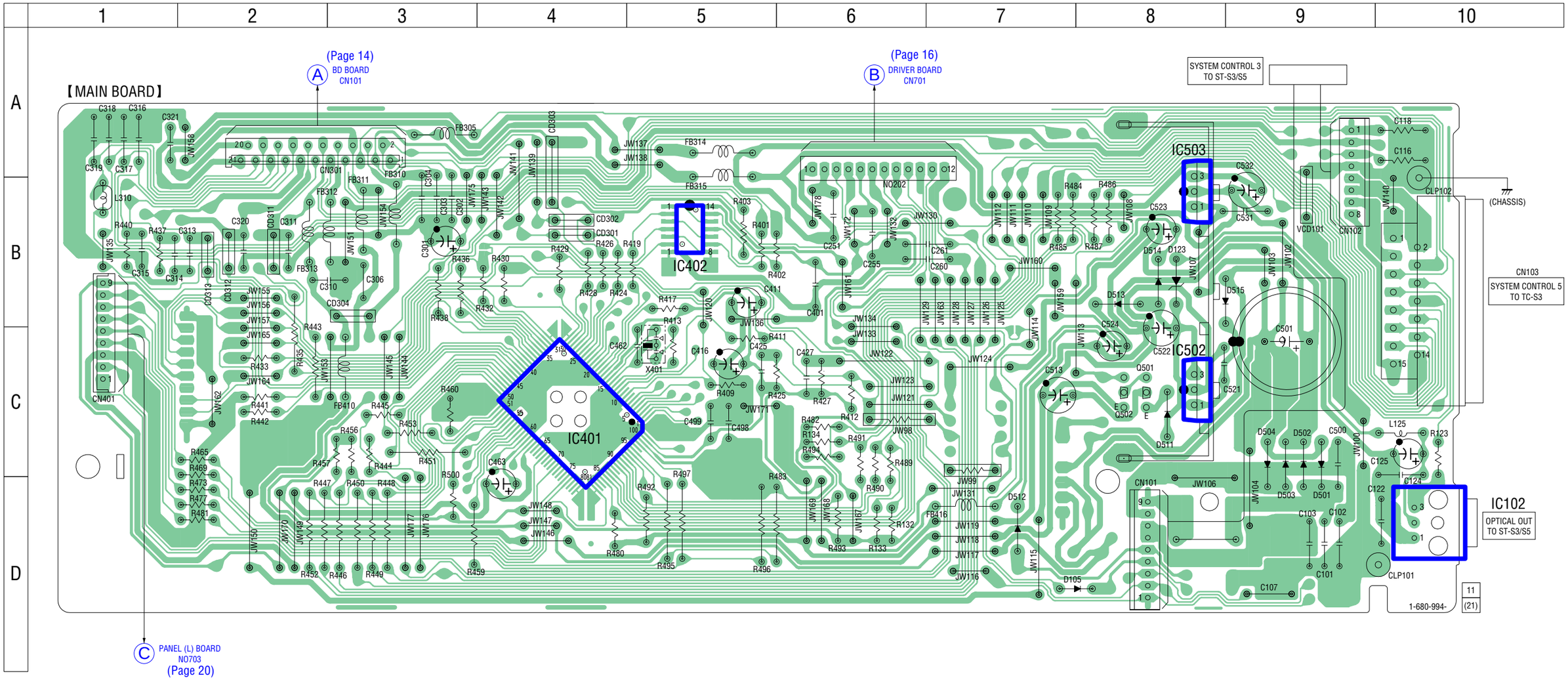
There are a few cases that the part isn't mounted in model is printed on diagrams.

6-5. SCHEMATIC DIAGRAM – CD CHANGER Section – • See page 22 for IC Block Diagram.



• Voltages and waveforms are dc with respect to ground under no-signal conditions.
no mark : CD STOP

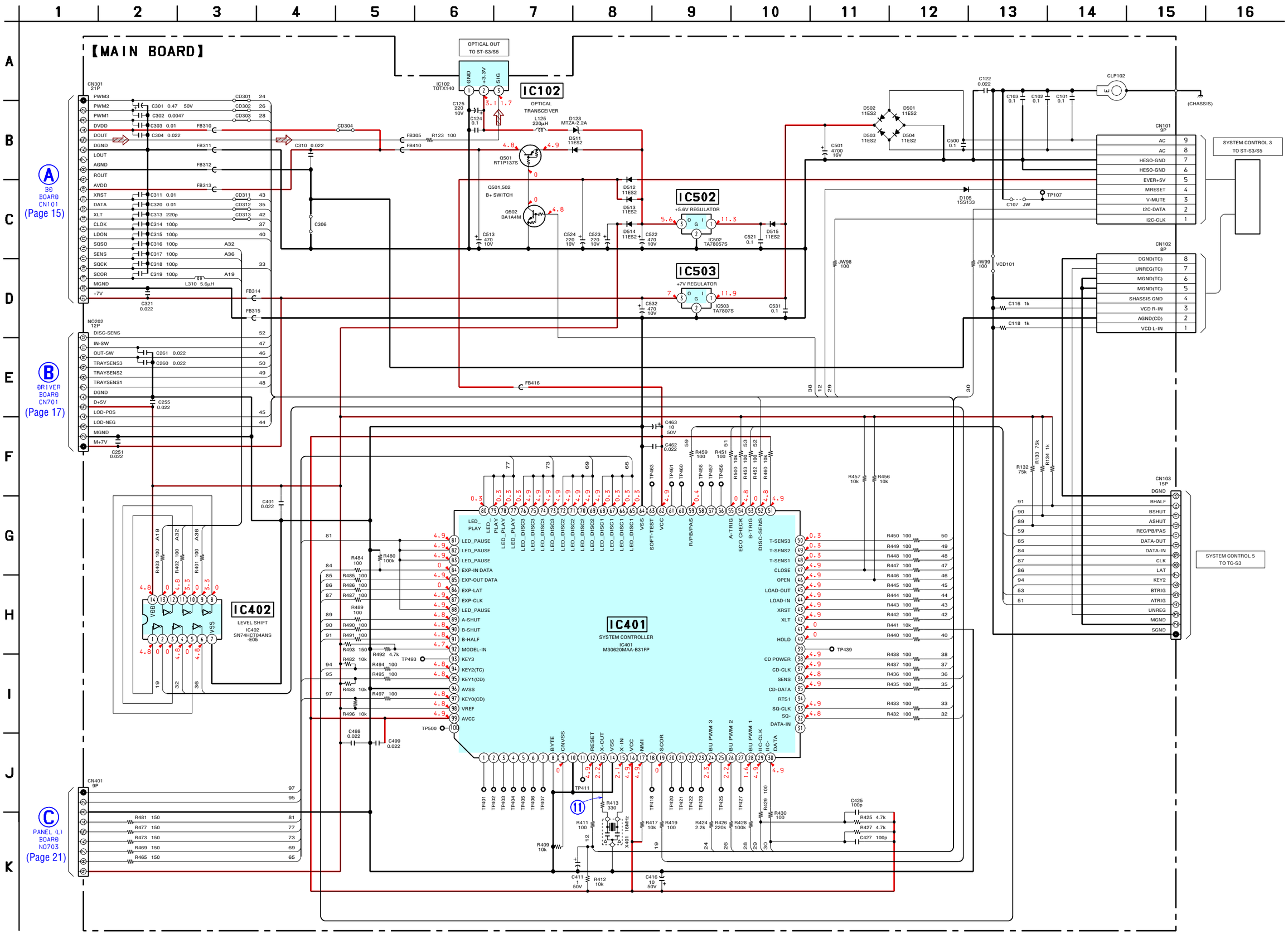
6-6. PRINTED WIRING BOARD – MAIN Section – • See page 13 for Circuit Boards Location.



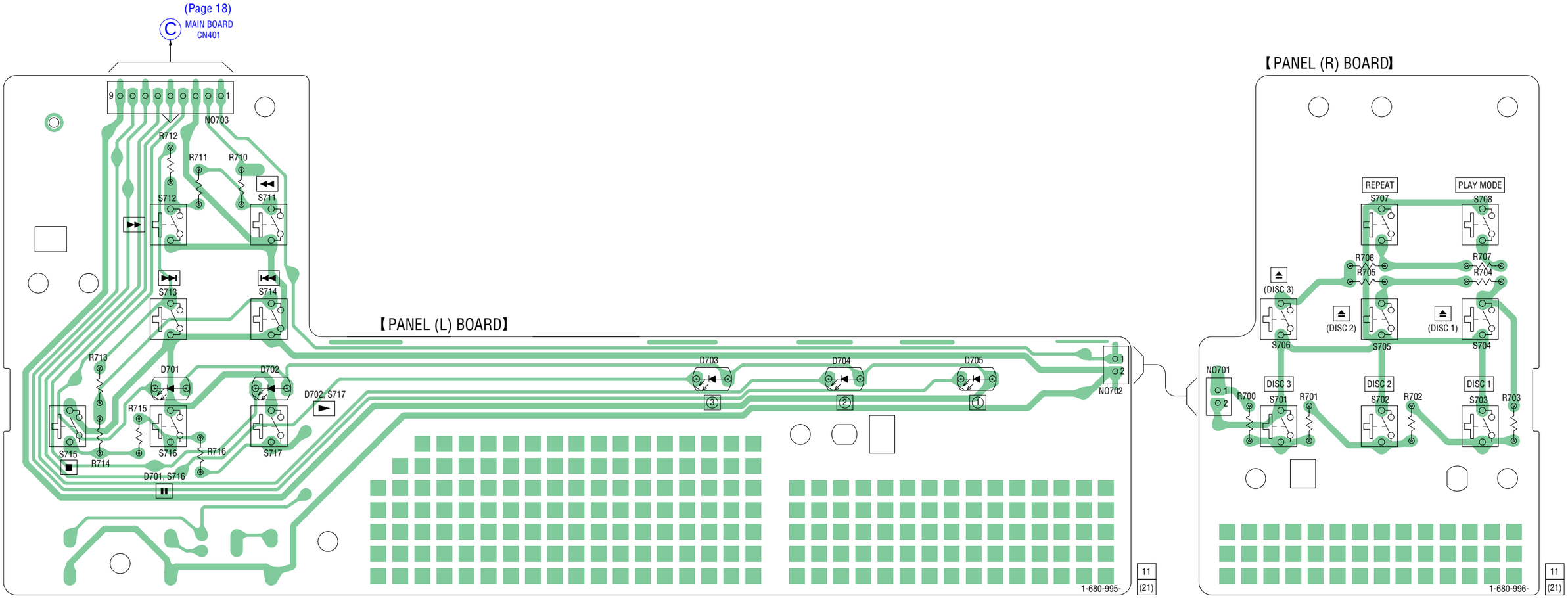
- **Semiconductor Location**

Ref. No.	Location	Ref. No.	Location
D103	D-9	IC102	D-10
D104	D-9	IC401	C-4
D105	D-7	IC402	B-5
D123	B-8	IC502	C-8
D501	C-9	IC503	B-8
D502	C-9		
D503	C-9	Q501	C-8
D504	C-9	Q502	C-8
D511	C-8		
D512	D-7		
D513	B-8		
D514	B-8		

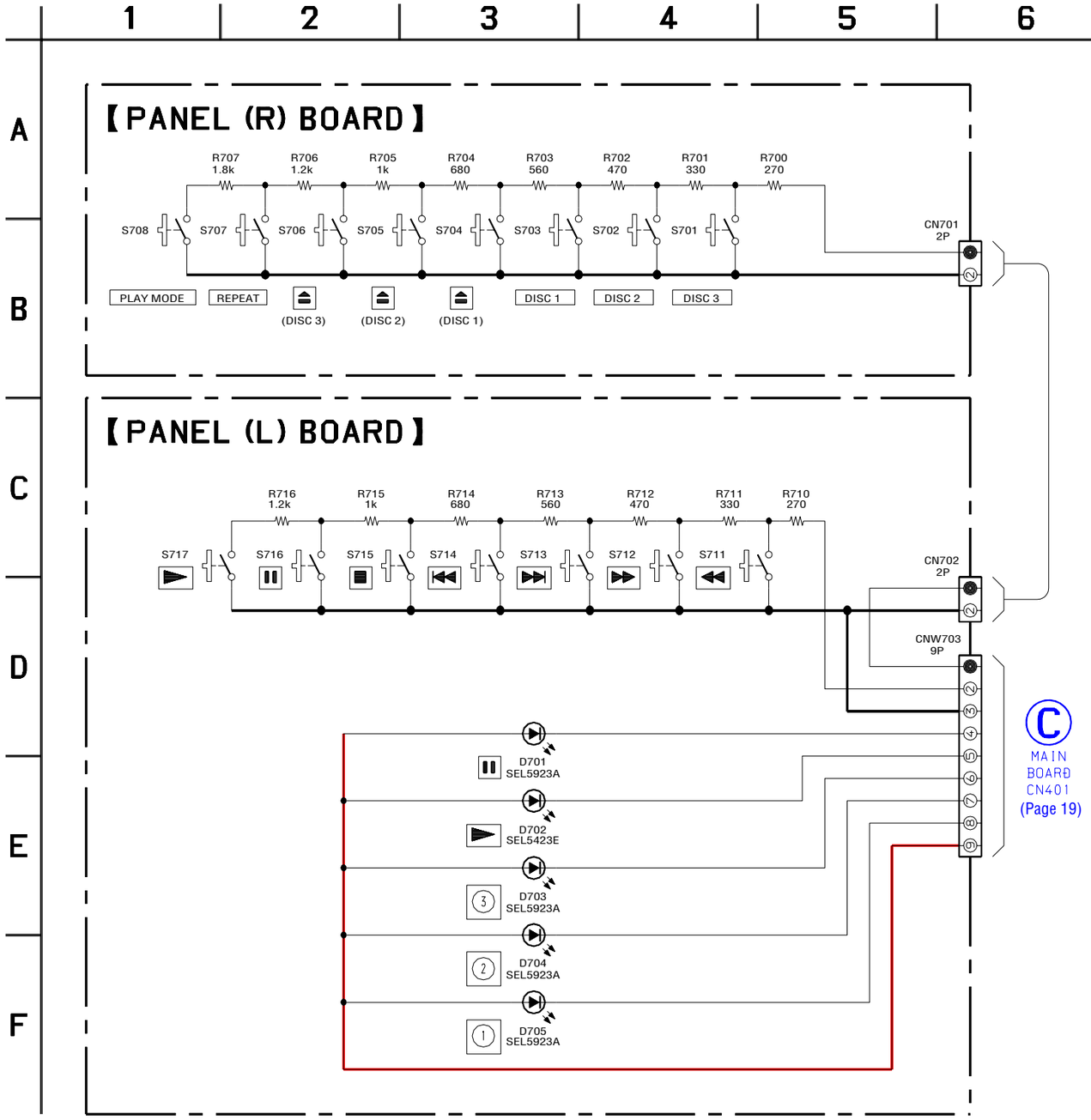
6-7. SCHEMATIC DIAGRAM – MAIN Section – • See page 22 for Waveform.



6-8. PRINTED WIRING BOARDS – PANEL Section – • See page 13 for Circuit Boards Location.



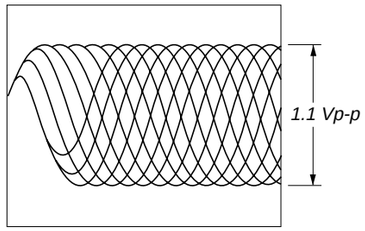
6-9. SCHEMATIC DIAGRAM – PANEL Section –



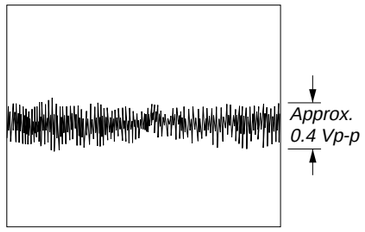
• **Waveforms**

– BD Board –

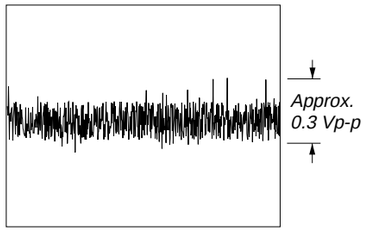
❶ IC101 ㊿㊶ (RFAC) (CD Play mode)



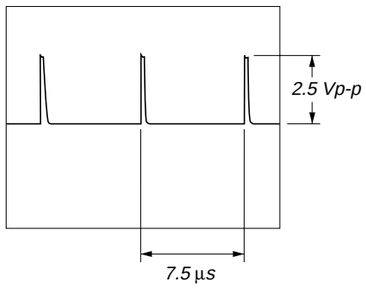
❷ IC101 ㊶ (TE) (CD Play mode)



❸ IC101 ㊴ (FE) (CD Play mode)

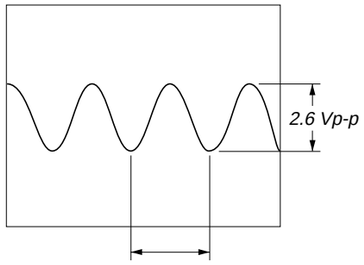


❹ IC101 ㉖ (MDP)



– MAIN Board –

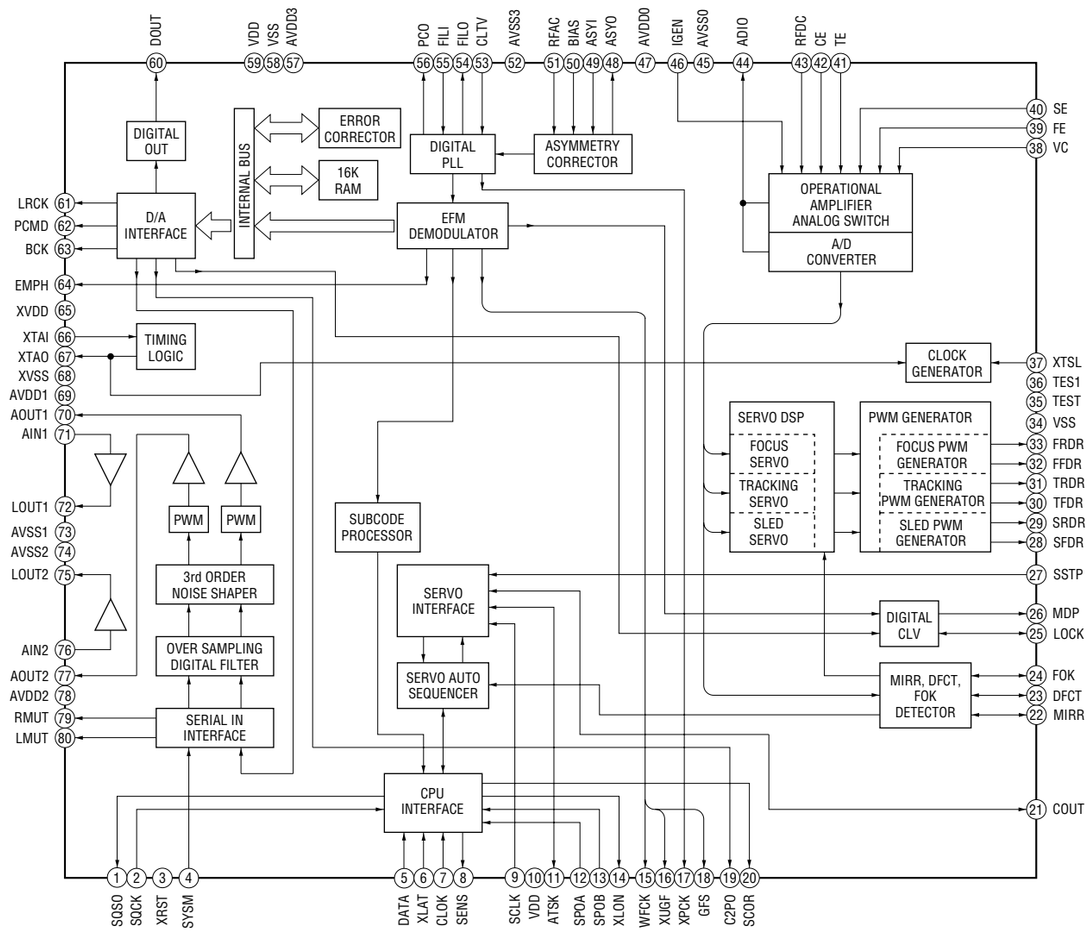
⓫ IC401 ⑬ (X-OUT)



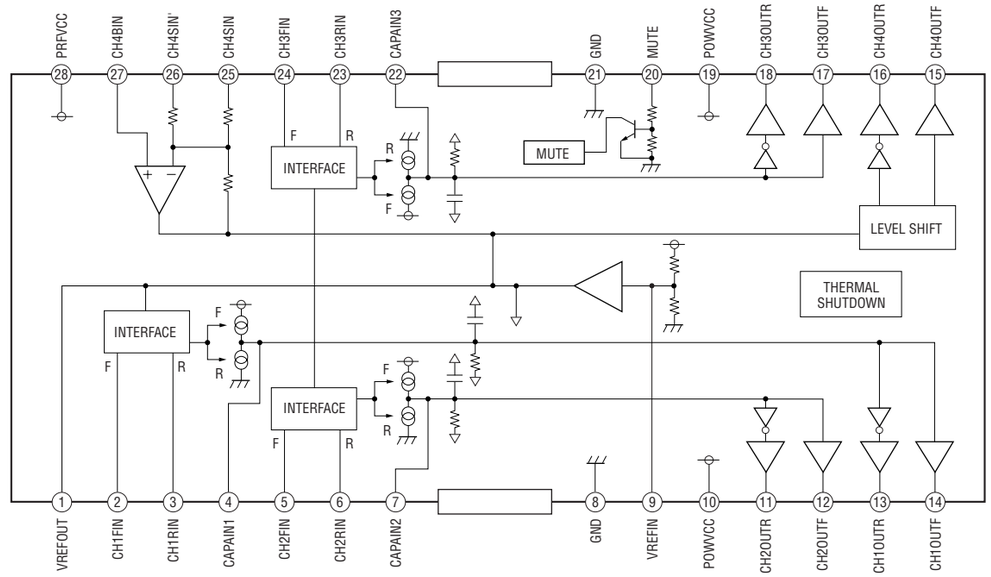
• **IC Block Diagrams**

– BD Board –

IC101 CXD3017Q

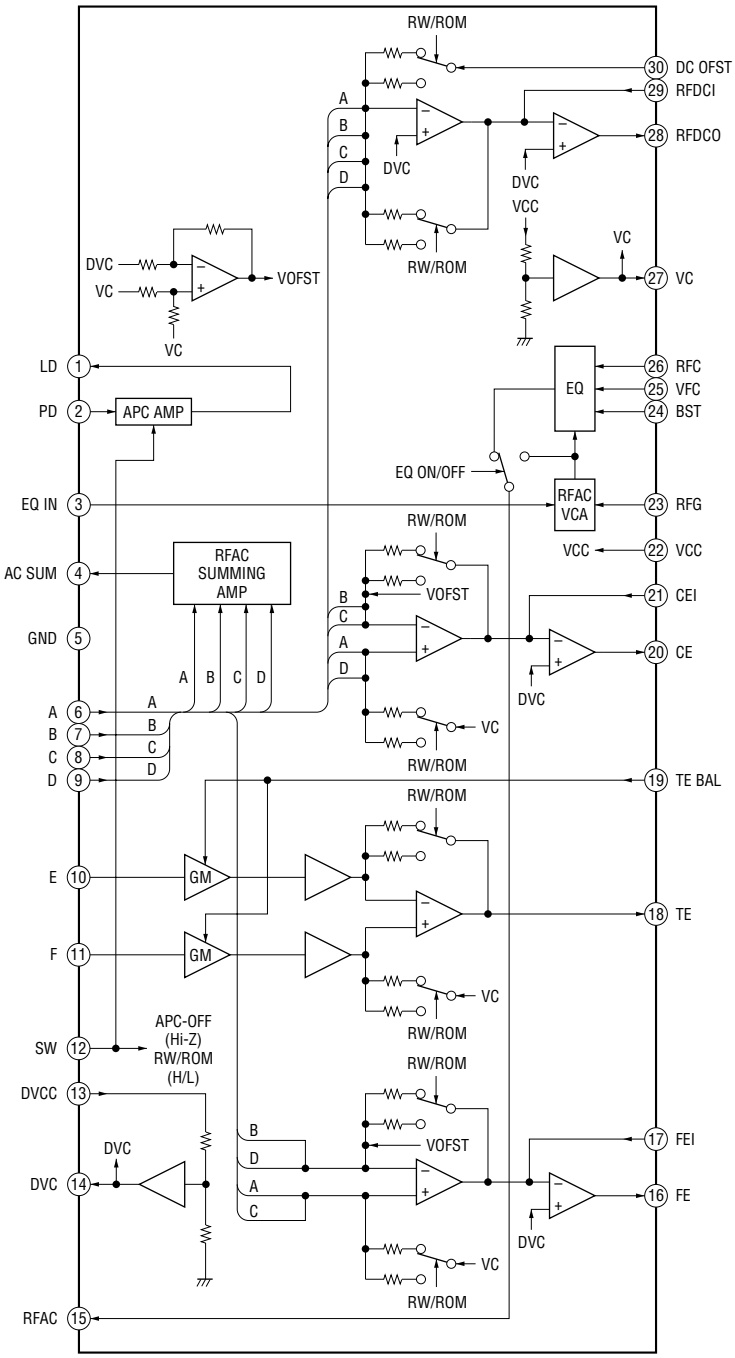


IC102 BA5974FM-E2

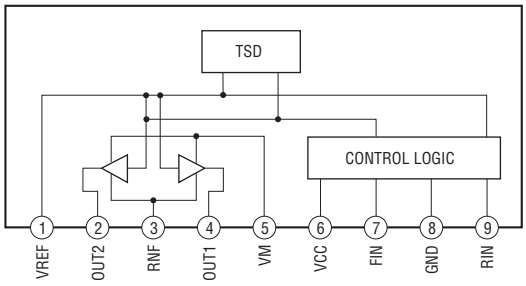


– DRIVER Board –

IC103 CXA2581N-T4



IC701 BA6956AN



6-10. IC PIN FUNCTION DESCRIPTION

• MAIN BOARD IC401 M30620MAA-B31FP (SYSTEM CONTROLLER)

Pin No.	Pin Name	I/O	Description
1 to 7	—	—	Not used (open)
8	BYTE	I	External data bus line byte selection signal input “L”: 16 bits, “H”: 8 bits Not used (fixed at “L”)
9	CNVSS	—	To flash memory connector
10	—	—	Not used (fixed at “L”)
11	—	—	Not used (open)
12	RESET	I	Reset signal input from the tuner unit (ST-S3/S5)
13	X-OUT	O	System clock output terminal (16 MHz)
14	VSS	—	Ground terminal
15	X-IN	I	System clock input terminal (16 MHz)
16	VCC	—	Power supply terminal (+5V)
17	NMI	I	Non-maskable interrupt input terminal (fixed at “H” in this set)
18	—	—	Not used (open)
19	SCOR	I	Subcode sync (S0+S1) detection signal input from the CXD3017Q (IC101)
20 to 23	—	—	Not used (open)
24	BU PWM 3	O	RFDC PWM signal output to the CXA2581N (IC103)
25	—	—	Not used (open)
26	BU PWM 2	O	Tracking error PWM signal output to the CXA2581N (IC103)
27	—	—	Not used (open)
28	BU PWM 1	O	Focus error PWM signal output to the CXA2581N (IC103)
29	IIC-CLK	I/O	Communication data reading clock signal input or transfer clock signal output with the tuner unit (ST-S3/S5)
30	IIC-DATA	I/O	Communication data bus with the tuner system (ST-S3/S5)
31	—	—	Not used
32	SQ-DATA-IN	I	Subcode Q data input from the CXD3017Q (IC101)
33	SQ-CLK	O	Subcode Q data reading clock signal output to the CXD3017Q (IC101)
34	RTS1	—	Not used
35	CD-DATA	O	CD decode data output to the CXD3017Q (IC101)
36	SENS	I	Internal status (SENSE) signal input from the CXD3017Q (IC101)
37	CD-CLK	O	Serial data transfer clock signal output to the CXD3017Q (IC101)
38	CD POWER	O	Power on/off control signal output for the CD mechanism deck section “L”: standby, “H”: power on
39	—	—	Not used (open)
40	HOLD	O	Automatic power control hold signal output to the CXA2581N (IC103)
41	—	—	Not used (fixed at “L”)
42	XLT	O	Serial data latch pulse output to the CXD3017Q (IC101)
43	XRST	O	Reset signal output to the CXD3017Q (IC101)
44	LOAD-IN	O	Loading motor drive signal (load-in direction) output the motor driver (IC701)
45	LOAD-OUT	O	Loading motor drive signal (load-out direction) output the motor driver (IC701)
46	OPEN	I	Sub tray load in/out detect switch (S742) input “L”: sub tray is chucking position
47	CLOSE	I	Sub tray load in/out detect switch (S742) input “L”: sub tray slides out of chucking position
48	T-SENS1	I	Detection input from the disc tray 1 height sensor (IC731) “H”: disc tray 1 position is chucking position
49	T-SENS2	I	Detection input from the disc tray 2 height sensor (IC732) “H”: disc tray 2 position is chucking position

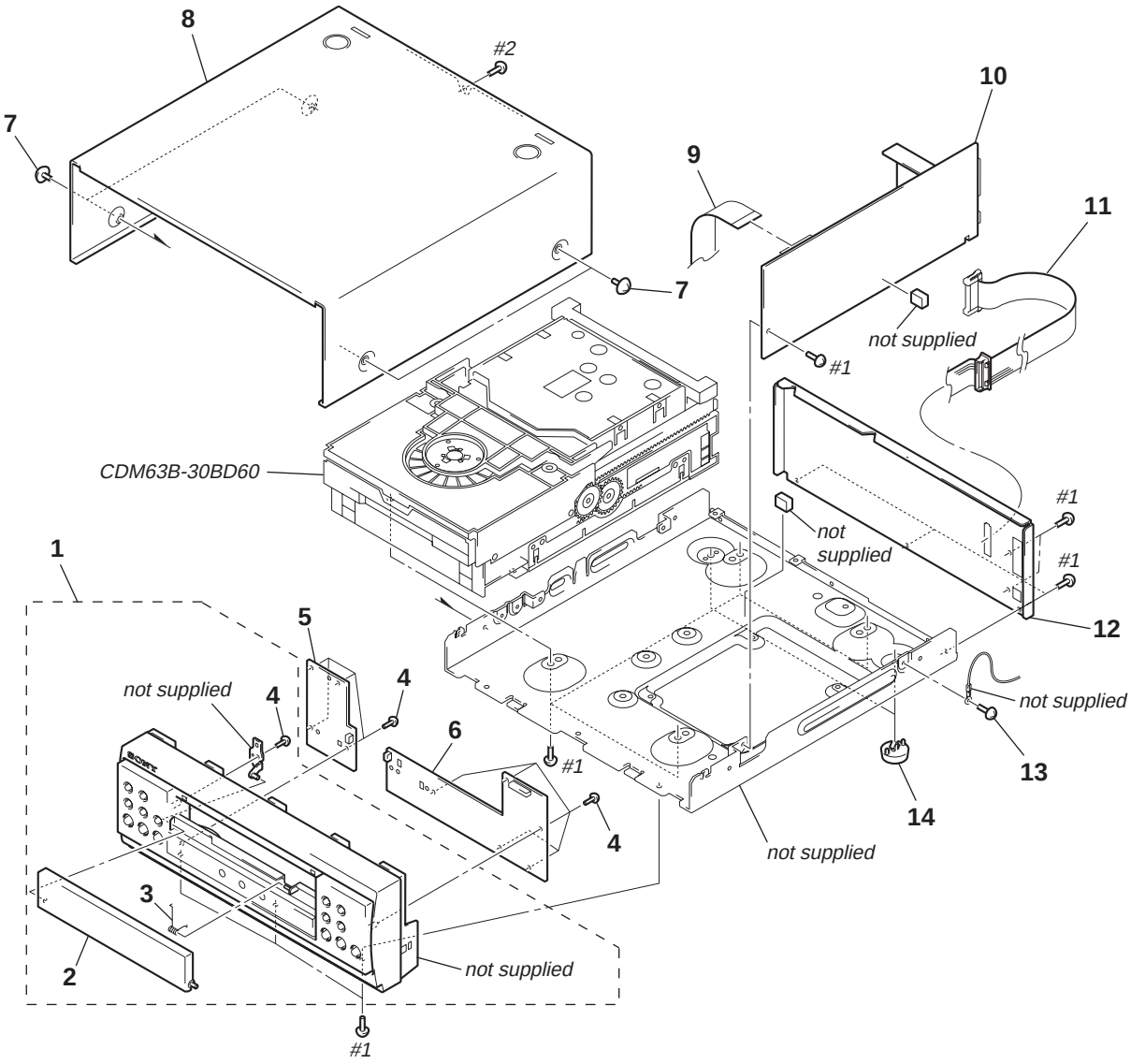
Pin No.	Pin Name	I/O	Description
50	T-SENS3	I	Detection input from the disc tray 3 height sensor (IC733) “H”: disc tray 3 position is chucking position
51	—	—	Not used (fixed at “H”)
52	DISC-SENS	I	Detection input from the disc in detect sensor (IC751)
53	B-TRIG	O	Deck-B trigger plunger drive signal output to the tape deck unit (TC-S3) “H”: trigger plunger on
54	ECO CHECK	—	Not used (fixed at “H”)
55	A-TRIG	O	Deck-A trigger plunger drive signal output to the tape deck unit (TC-S3) “H”: trigger plunger on
56 to 58	—	—	Not used (open)
59	R/PB/PASS	O	Recording/playback/pass selection signal output to the tape deck unit (TC-S3) “L”: recording, center voltage: playback, “H”: pass
60, 61	—	—	Not used (open)
62	VCC	—	Power supply terminal (+5V)
63	SOFT-TEST	O	For software check terminal
64	VSS	—	Ground terminal
65 to 68	LED_DISC1	O	LED drive signal output of the ① indicator (D705) “L”: LED on
69 to 72	LED_DISC2	O	LED drive signal output of the ② indicator (D704) “L”: LED on
73 to 76	LED_DISC3	O	LED drive signal output of the ③ indicator (D703) “L”: LED on
77 to 80	LED_PLAY	O	LED drive signal output of the ► indicator (D702) “L”: LED on
81 to 83	LED_PAUSE	O	LED drive signal output of the ❚❚ indicator (D701) “L”: LED on
84	EXP-IN DATA	I	Serial data input from the tape deck unit (TC-S3)
85	EXP-OUT DATA	O	Serial data output to the tape deck unit (TC-S3)
86	EXP-LAT	O	Serial data latch pulse signal output to the tape deck unit (TC-S3)
87	EXP-CLK	O	Serial data transfer clock signal output to the tape deck unit (TC-S3)
88	LED_PAUSE	O	LED drive signal output of the ❚❚ indicator (D701) “L”: LED on
89	A-SHUT	I	Shut off (desk-A) detection signal input from the tape deck unit (TC-S3)
90	B-SHUT	I	Shut off (desk-B) detection signal input from the tape deck unit (TC-S3)
91	B-HALF	I	Detection input from the deck-B cassette detect switch of the tape deck unit (TC-S3) “L”: cassette in
92	MODEL-IN	I	Model destination setting terminal
93	KEY3	—	Not used (open)
94	KEY2 (TC)	I	Key input from the tape deck unit (TC-S3) (A/D input)
95	KEY1 (CD)	I	Key input terminal (A/D input) (S711 to S717) ◄◄, ►► , ⏮, ⏭, ■, ❚❚, ► keys input
96	AVSS	—	Ground terminal (for A/D conversion)
97	KEY1 (CD)	I	Key input terminal (A/D input) (S701 to S708) DISC 3, DISC 2, DISC 1, ⏏ (DISC1), ⏏ (DISC2), ⏏ (DISC3), REPEAT, PLAY MODE keys input
98	VREF	I	Reference voltage (+5V) input terminal (for A/D converter)
99	AVCC	—	Power supply terminal (+5V) (for A/D conversion)
100	—	—	Not used (open)

SECTION 7
EXPLODED VIEWS

NOTE:
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts
  Example:
  KNOB, BALANCE (WHITE) . . . (RED)
  ↑ ↑
  Parts Color Cabinet's Color
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.

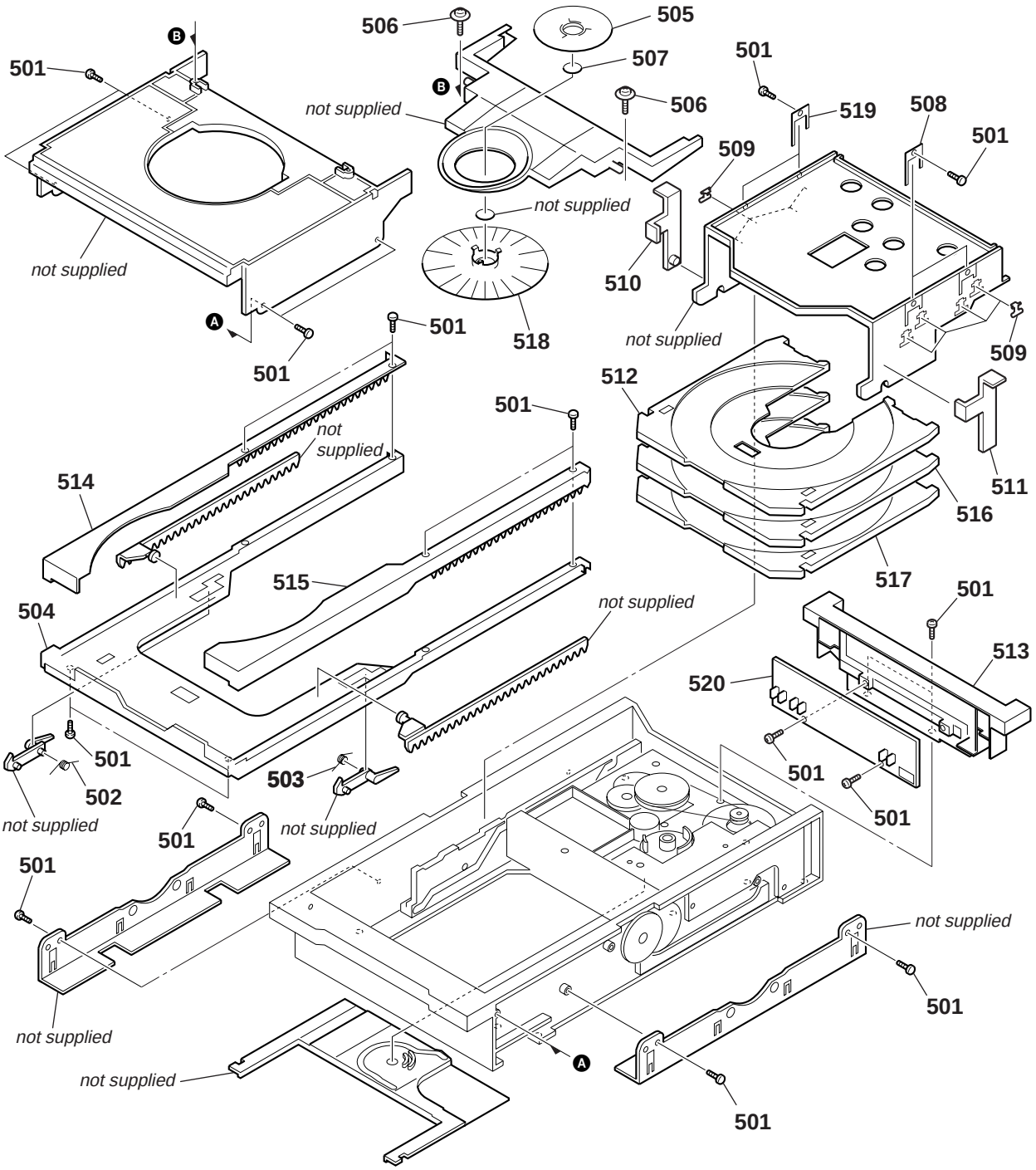
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

7-1. GENERAL SECTION



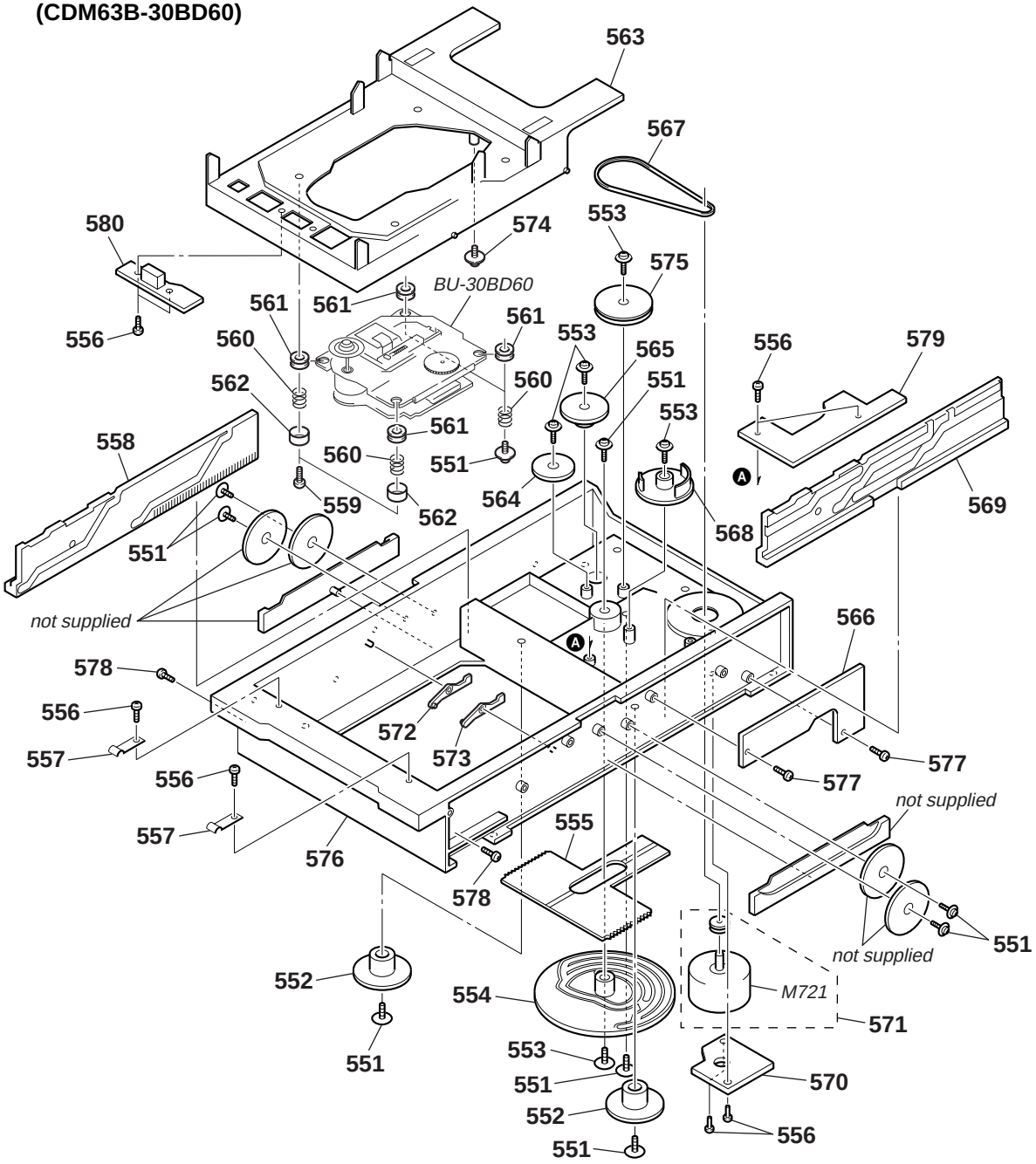
Ref. No.	Part No.	Description	Remark
1	X-4953-613-1	PANEL ASSY, FRONT	
2	4-233-136-01	LID (CD)	
3	4-233-147-01	SPRING (CD)	
4	4-951-620-01	SCREW (2.6X8), +BVTP	
5	1-680-996-11	PANEL (R) BOARD	
6	1-680-995-11	PANEL (L) BOARD	
7	3-363-099-21	SCREW (CASE 3 TP2)	
8	4-233-134-11	COVER	
9	1-823-055-11	WIRE (FLAT TYPE) (21 CORE)	
10	A-4725-658-A	MAIN BOARD, COMPLETE	
11	1-757-633-11	CORD (WITH CONNECTOR) 17P	
12	4-233-135-01	PANEL, BACK (AEP, UK)	
12	4-233-135-11	PANEL, BACK (Korea, Australian)	
12	4-233-135-31	PANEL, BACK (Mexican)	
13	3-970-608-01	SUMITITE (B3), +BV	
14	4-965-822-01	FOOT	
#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	
#2	7-685-871-01	SCREW +BVTT 3X6 (S)	

7-2. CD MECHANISM DECK SECTION-1 (CDM63B-30BD60)



Ref. No.	Part No.	Description	Remark
501	4-218-253-01	SCREW (M2.6), +BTTP	
502	4-228-996-01	SPRING (R), TORSION	
503	4-228-995-01	SPRING (L), TORSION	
504	4-228-972-02	TRAY (MAIN)	
505	4-231-971-01	PULLEY (30B), CHUCKING	
506	4-985-672-01	SCREW (+PTPWH M2.6), FLOATING	
507	4-228-414-01	BRACKET (YOKE)	
508	4-228-980-01	SPRING (STOCKER), LEAF	
509	4-228-981-02	STOPPER (TRAY)	
510	4-228-963-01	SLIDER (STOCKER. L)	
511	4-228-964-01	SLIDER (STOCKER. R)	
512	4-228-970-02	TRAY (SUB)	
513	4-229-001-01	HOLDER (SENSOR)	
514	4-228-975-02	COVER (TRAY. L)	
515	4-228-978-02	COVER (TRAY. R)	
516	4-228-970-12	TRAY (SUB)	
517	4-228-970-22	TRAY (SUB)	
518	X-4953-307-1	PULLEY (A) ASSY, CHUCKING	
519	4-234-423-01	SPRING (STOCKER L), LEAF	
520	1-678-457-11	TRAY SENSOR BOARD	

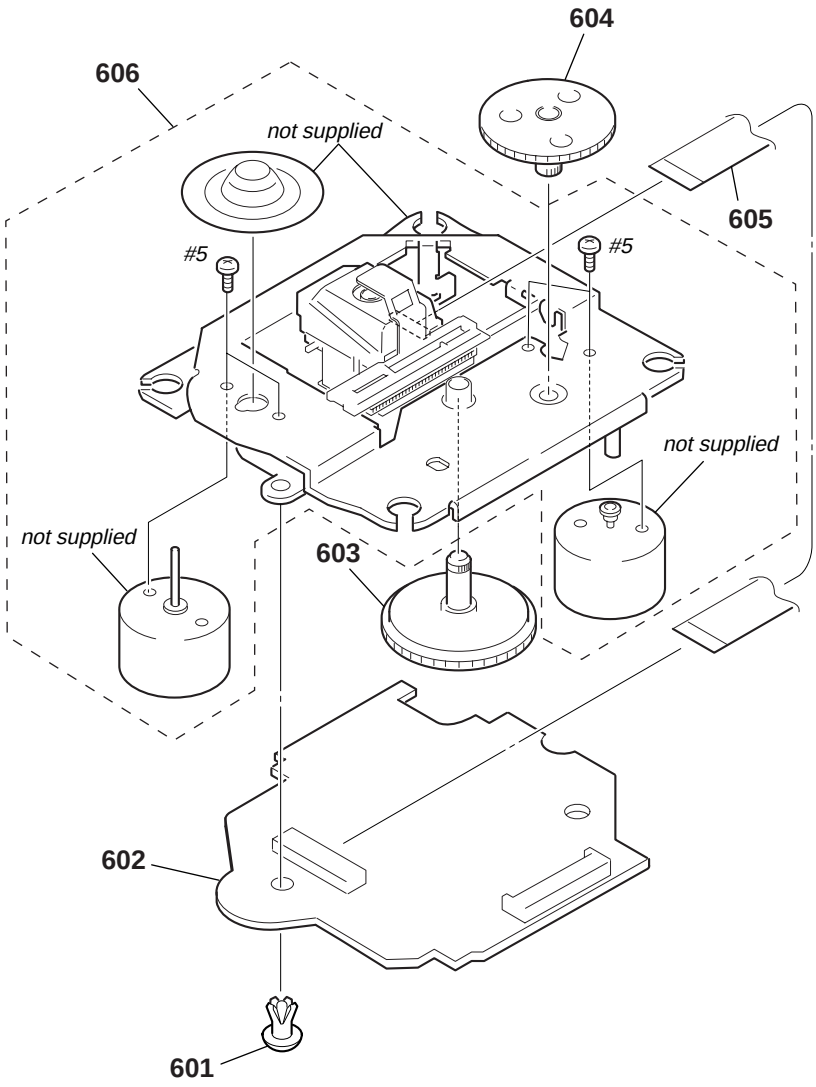
7-3. CD MECHANISM DECK SECTION-2 (CDM63B-30BD60)



Ref. No.	Part No.	Description	Remark
551	4-985-672-01	SCREW (+PTPWH M2.6), FLOATING	
552	4-229-002-02	GEAR (SLIDER)	
553	4-218-254-21	SCREW (M2.6), +PTPWH	
554	4-228-971-01	CAM	
555	4-228-974-02	RACK (CENTER)	
556	4-218-253-01	SCREW (M2.6), +BTTP	
557	4-228-969-02	SPRING (TABLE), LEAF	
558	4-228-977-01	SLIDER (BU. L)	
559	4-951-620-01	SCREW (2.6X8), +BVTP	
560	4-227-045-11	SPRING (INSULATOR), COIL	
561	4-231-451-01	INSULATOR (BU-30)	
562	4-231-151-01	STOPPER (BU)	
563	4-231-517-03	HOLDER (BU30)	
564	4-228-985-01	GEAR (PULLEY)	
565	4-228-997-02	GEAR (CAM)	
566	1-678-460-11	DRIVER BOARD	

Ref. No.	Part No.	Description	Remark
567	4-228-968-01	BELT	
568	4-228-998-01	GEAR (DETECTION)	
569	4-228-976-01	SLIDER (BU. R)	
570	1-678-461-11	MOTOR BOARD	
571	X-4952-971-2	MOTOR ASSY	
572	4-228-999-02	LEVER (MAIN. L)	
573	4-229-000-02	LEVER (MAIN. R)	
574	4-227-899-01	SCREW (DIA. 12), FLOATING	
575	4-229-003-01	PULLEY	
576	4-228-988-01	CHASSIS	
577	4-218-253-61	SCREW (M2.6), +BTTP	
578	4-218-253-71	SCREW (M2.6), +BTTP	
579	1-678-462-11	IN OUT SW BOARD	
580	1-678-463-11	DISC SENSOR BOARD	
M721	1-541-632-12	MOTOR, DC (LOADING)	

7-4. BASE UNIT SECTION (BU-30BD60)



The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description	Remark
601	3-531-576-11	RIVET	
602	A-4725-531-A	BD BOARD, COMPLETE	
603	4-233-832-01	GEAR (LB)	
604	4-233-831-01	GEAR (LA)	
605	1-757-710-11	WIRE (FLAT TYPE) (16 CORE)	
⚠606	A-4735-188-A	BU-30 (60) ASSY	
#5	7-627-853-28	SCREW, PRECISION +P 2X3 TYPE3	

SECTION 8
ELECTRICAL PARTS LIST

BD

NOTE:
- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL: Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F: nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u: µ, for example:
  uA. . : µA. . uPA. . : µPA. .
  uPB. . : µPB. . uPC. . : µPC. .
  uPD. . : µPD. .
- CAPACITORS
  uF: µF
- COILS
  uH: µH

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description			Remark
	A-4725-531-A	BD BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C101	1-162-967-11	CERAMIC CHIP	0.0033uF	10%	50V
C102	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C103	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C104	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C108	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C109	1-162-965-11	CERAMIC CHIP	0.0015uF	10%	50V
C110	1-162-967-11	CERAMIC CHIP	0.0033uF	10%	50V
C111	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C112	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C114	1-163-038-11	CERAMIC CHIP	0.1uF		25V
C116	1-104-665-11	ELECT	100uF	20%	10V
C117	1-104-665-11	ELECT	100uF	20%	10V
C118	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C121	1-163-038-11	CERAMIC CHIP	0.1uF		25V
C122	1-124-584-00	ELECT	100uF	20%	10V
C123	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C124	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C125	1-163-038-11	CERAMIC CHIP	0.1uF		25V
C126	1-163-038-11	CERAMIC CHIP	0.1uF		25V
C127	1-124-584-00	ELECT	100uF	20%	10V
C129	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C130	1-163-038-11	CERAMIC CHIP	0.1uF		25V
C131	1-104-665-11	ELECT	100uF	20%	10V
C133	1-162-921-11	CERAMIC CHIP	33PF	5%	50V
C143	1-163-038-11	CERAMIC CHIP	0.1uF		25V
C145	1-163-038-11	CERAMIC CHIP	0.1uF		25V
C153	1-163-038-11	CERAMIC CHIP	0.1uF		25V
C159	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C162	1-104-665-11	ELECT	100uF	20%	10V
C165	1-163-038-11	CERAMIC CHIP	0.1uF		25V
C167	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C168	1-162-921-11	CERAMIC CHIP	33PF	5%	50V
C171	1-115-412-11	CERAMIC CHIP	680PF	5%	25V
C172	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C181	1-115-412-11	CERAMIC CHIP	680PF	5%	25V
C182	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C183	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C184	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C185	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C190	1-115-156-11	CERAMIC CHIP	1uF		10V
C191	1-124-584-00	ELECT	100uF	20%	10V
C192	1-163-038-11	CERAMIC CHIP	0.1uF		25V
C193	1-104-665-11	ELECT	100uF	20%	10V
C194	1-163-038-11	CERAMIC CHIP	0.1uF		25V
C195	1-163-038-11	CERAMIC CHIP	0.1uF		25V
C196	1-163-038-11	CERAMIC CHIP	0.1uF		25V
C197	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C198	1-124-584-00	ELECT	100uF	20%	10V
		< CONNECTOR >			
CN101	1-568-864-11	CONNECTOR, FFC 21P			
CN102	1-793-907-11	CONNECTOR, FFC/FPC 16P			
		< DIODE >			
D101	8-719-422-12	DIODE UDZ-TE-17-3.9B			
		< FERRITE BEAD >			
FB101	1-500-445-21	FERRITE	0uH		
FB102	1-500-445-21	FERRITE	0uH		
		< IC >			
IC101	8-752-402-31	IC CXD3017Q			
IC102	8-759-827-41	IC BA5974FM-E2			
IC103	8-752-089-74	IC CXA2581N-T4			
		< SHORT >			
JR101	1-216-295-11	SHORT	0		
JR102	1-216-295-11	SHORT	0		
JR103	1-216-295-11	SHORT	0		
JR104	1-216-295-11	SHORT	0		
JR105	1-216-295-11	SHORT	0		
JR106	1-216-295-11	SHORT	0		
JR122	1-216-296-11	SHORT	0		
JR123	1-216-296-11	SHORT	0		
JR124	1-216-296-11	SHORT	0		
JR125	1-216-296-11	SHORT	0		
		< COIL >			
L101	1-469-553-21	INDUCTOR	4.7uH		
		< TRANSISTOR >			
Q101	8-729-010-08	TRANSISTOR	MSB710-RT1		

BD DISC SENSOR DRIVER IN OUT SW MAIN

Ref. No.	Part No.	Description			Remark
Q102	8-729-920-85	TRANSISTOR	2SD1664-T100-QR		
		< RESISTOR >			
R101	1-216-049-11	RES-CHIP	1K	5%	1/10W
R102	1-216-097-11	RES-CHIP	100K	5%	1/10W
R103	1-216-077-00	RES-CHIP	15K	5%	1/10W
R104	1-216-085-00	METAL CHIP	33K	5%	1/10W
R105	1-216-049-11	RES-CHIP	1K	5%	1/10W
R106	1-216-049-11	RES-CHIP	1K	5%	1/10W
R107	1-216-073-00	METAL CHIP	10K	5%	1/10W
R108	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R109	1-216-121-11	RES-CHIP	1M	5%	1/10W
R111	1-216-099-00	METAL CHIP	120K	5%	1/10W
R114	1-218-745-11	RES-CHIP	160K	5%	1/16W
R116	1-216-001-00	METAL CHIP	10	5%	1/10W
R117	1-216-049-11	RES-CHIP	1K	5%	1/10W
R118	1-216-025-11	RES-CHIP	100	5%	1/10W
R119	1-216-059-00	METAL CHIP	2.7K	5%	1/10W
R120	1-216-077-00	RES-CHIP	15K	5%	1/10W
R122	1-216-097-11	RES-CHIP	100K	5%	1/10W
R123	1-216-073-00	METAL CHIP	10K	5%	1/10W
R124	1-216-097-11	RES-CHIP	100K	5%	1/10W
R131	1-216-033-00	METAL CHIP	220	5%	1/10W
R143	1-216-085-00	METAL CHIP	33K	5%	1/10W
R144	1-216-085-00	METAL CHIP	33K	5%	1/10W
R147	1-216-059-00	METAL CHIP	2.7K	5%	1/10W
R148	1-216-001-00	METAL CHIP	10	5%	1/10W
R149	1-216-001-00	METAL CHIP	10	5%	1/10W
R158	1-216-083-00	METAL CHIP	27K	5%	1/10W
R159	1-216-083-00	METAL CHIP	27K	5%	1/10W
R162	1-216-097-11	RES-CHIP	100K	5%	1/10W
R171	1-216-081-00	METAL CHIP	22K	5%	1/10W
R172	1-216-081-00	METAL CHIP	22K	5%	1/10W
R173	1-216-081-00	METAL CHIP	22K	5%	1/10W
R181	1-216-081-00	METAL CHIP	22K	5%	1/10W
R182	1-216-081-00	METAL CHIP	22K	5%	1/10W
R183	1-216-081-00	METAL CHIP	22K	5%	1/10W
R190	1-216-033-00	METAL CHIP	220	5%	1/10W
R191	1-216-085-00	METAL CHIP	33K	5%	1/10W
R192	1-216-085-00	METAL CHIP	33K	5%	1/10W
R193	1-216-099-00	METAL CHIP	120K	5%	1/10W
R194	1-216-097-11	RES-CHIP	100K	5%	1/10W
R195	1-216-113-00	METAL CHIP	470K	5%	1/10W
R196	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R198	1-216-295-11	SHORT	0		
		< COMPOSITION CIRCUIT BLOCK >			
RN101	1-233-576-11	RES, CHIP NETWORK 100			
		< VARIABLE RESISTOR >			
RV101	1-238-602-11	RES, ADJ, CARBON 47K			
		< VIBRATOR >			
X101	1-579-280-11	VIBRATOR, CRYSTAL (16.9344MHz)			
**********					
	1-678-463-11	DISC SENSOR BOARD			
		**********			
		< PHOTO REFLECTOR >			
IC751	8-749-924-30	PHOTO REFLECTOR	GP2S28		(DISC IN DETECT)
		< RESISTOR >			
R751	1-249-407-11	CARBON	150	5%	1/4W
**********					
	1-678-460-11	DRIVER BOARD			
		**********			
		< CAPACITOR >			
C701	1-124-261-00	ELECT	10uF	20%	50V
C705	1-124-261-00	ELECT	10uF	20%	50V
C706	1-164-159-11	CERAMIC	0.1uF		50V
C707	1-164-159-11	CERAMIC	0.1uF		50V
		< CONNECTOR >			
CN701	1-785-324-11	PIN, CONNECTOR (STRAIGHT) 12P			
CN702	1-785-328-11	PIN, CONNECTOR (LIGHT ANGRE) 2P			
CN703	1-785-331-11	PIN, CONNECTOR (LIGHT ANGLE) 5P			
CN704	1-785-329-11	PIN, CONNECTOR (LIGHT ANGLE) 3P			
CN705	1-785-329-21	PIN, CONNECTOR (LIGHT ANGLE) 3P			
		< IC >			
IC701	8-759-598-69	IC	BA6956AN		
		< TRANSISTOR >			
Q701	8-729-029-66	TRANSISTOR	RT1N141S-TP		
		< RESISTOR >			
R701	1-249-429-11	CARBON	10K	5%	1/4W
R702	1-249-401-11	CARBON	47	5%	1/4W
R705	1-249-435-11	CARBON	33K	5%	1/4W
R706	1-249-417-11	CARBON	1K	5%	1/4W
R707	1-249-429-11	CARBON	10K	5%	1/4W
**********					
	1-678-462-11	IN OUT SW BOARD			
		**********			
		< SWITCH >			
S741	1-771-821-11	SWITCH, PUSH (1 KEY) (IN)			
S742	1-771-821-11	SWITCH, PUSH (1 KEY) (OUT)			
**********					
	A-4725-658-A	MAIN BOARD, COMPLETE			
		**********			
	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S			
		< CAPACITOR/RESISTOR >			
C101	1-164-159-11	CERAMIC	0.1uF		50V
C102	1-164-159-11	CERAMIC	0.1uF		50V
C103	1-164-159-11	CERAMIC	0.1uF		50V
C116	1-249-417-11	CARBON	1K	5%	1/4W
C118	1-249-417-11	CARBON	1K	5%	1/4W

MAIN

Ref. No.	Part No.	Description			Remark
C122	1-161-494-00	CERAMIC	0.022uF		25V
C124	1-164-159-11	CERAMIC	0.1uF		50V
C125	1-126-923-11	ELECT	220uF	20%	10V
C251	1-161-494-00	CERAMIC	0.022uF		25V
C255	1-161-494-00	CERAMIC	0.022uF		25V
C260	1-161-494-00	CERAMIC	0.022uF		25V
C261	1-161-494-00	CERAMIC	0.022uF		25V
C301	1-126-959-11	ELECT	0.47uF	20%	50V
C302	1-162-600-11	CERAMIC	0.0047uF	20%	16V
C303	1-162-306-11	CERAMIC	0.01uF	20%	16V
C304	1-161-494-00	CERAMIC	0.022uF		25V
C310	1-161-494-00	CERAMIC	0.022uF		25V
C311	1-162-306-11	CERAMIC	0.01uF	20%	16V
C313	1-162-286-31	CERAMIC	220PF	10%	50V
C314	1-162-282-31	CERAMIC	100PF	10%	50V
C315	1-162-282-31	CERAMIC	100PF	10%	50V
C316	1-162-282-31	CERAMIC	100PF	10%	50V
C317	1-162-282-31	CERAMIC	100PF	10%	50V
C318	1-162-282-31	CERAMIC	100PF	10%	50V
C319	1-162-282-31	CERAMIC	100PF	10%	50V
C320	1-162-306-11	CERAMIC	0.01uF	20%	16V
C321	1-161-494-00	CERAMIC	0.022uF		25V
C401	1-161-494-00	CERAMIC	0.022uF		25V
C411	1-126-960-11	ELECT	1uF	20%	50V
C416	1-126-964-11	ELECT	10uF	20%	50V
C425	1-162-282-31	CERAMIC	100PF	10%	50V
C427	1-162-282-31	CERAMIC	100PF	10%	50V
C462	1-161-494-00	CERAMIC	0.022uF		25V
C463	1-126-964-11	ELECT	10uF	20%	50V
C498	1-161-494-00	CERAMIC	0.022uF		25V
C499	1-161-494-00	CERAMIC	0.022uF		25V
C500	1-164-159-11	CERAMIC	0.1uF		50V
C501	1-126-937-11	ELECT	4700uF	20%	16V
C513	1-126-935-11	ELECT	470uF	20%	10V
C521	1-164-159-11	CERAMIC	0.1uF		50V
C522	1-126-935-11	ELECT	470uF	20%	10V
C523	1-126-934-11	ELECT	220uF	20%	10V
C524	1-126-934-11	ELECT	220uF	20%	10V
C531	1-164-159-11	CERAMIC	0.1uF		50V
C532	1-126-935-11	ELECT	470uF	20%	10V
		< CONNECTOR >			
* CN101	1-568-419-11	PIN, CONNECTOR 9P			
CN102	1-568-373-11	PIN, CONNECTOR 8P			
CN103	1-566-859-11	SOCKET, CONNECTOR 15P (SYSTEM CONTROL 5 TO TC-S3)			
CN301	1-568-838-11	CONNECTOR, FFC 21P			
* CN401	1-568-936-11	PIN, CONNECTOR 9P			
		< DIODE >			
D105	8-719-911-19	DIODE 1SS133T-72			
D123	8-719-982-96	DIODE MTZJ-T-72-2.2A			
D501	8-719-024-99	DIODE 11ES2-NTA2B			
D502	8-719-024-99	DIODE 11ES2-NTA2B			
D503	8-719-024-99	DIODE 11ES2-NTA2B			
D504	8-719-024-99	DIODE 11ES2-NTA2B			
D511	8-719-024-99	DIODE 11ES2-NTA2B			
D512	8-719-024-99	DIODE 11ES2-NTA2B			

Ref. No.	Part No.	Description			Remark
D513	8-719-024-99	DIODE 11ES2-NTA2B			
D514	8-719-024-99	DIODE 11ES2-NTA2B			
D515	8-719-024-99	DIODE 11ES2-NTA2B			
		< FERRITE BEAD >			
FB305	1-412-473-21	INDUCTOR	0uH		
FB310	1-412-473-21	INDUCTOR	0uH		
FB311	1-412-473-21	INDUCTOR	0uH		
FB312	1-412-473-21	INDUCTOR	0uH		
FB313	1-412-473-21	INDUCTOR	0uH		
FB314	1-412-473-21	INDUCTOR	0uH		
FB315	1-412-473-21	INDUCTOR	0uH		
FB410	1-412-473-21	INDUCTOR	0uH		
FB416	1-412-473-21	INDUCTOR	0uH		
		< IC >			
IC102	8-749-019-13	IC TOTX140 (OPTICAL OUT TO ST-S3/S5)			
IC401	8-759-827-46	IC M30620MAA-B31FP			
IC402	8-759-269-09	IC SN74HCT04ANS-E05			
IC502	8-759-158-62	IC TA78057S			
IC503	8-759-071-48	IC TA7807S			
		< RESISTOR >			
JW98	1-247-807-31	CARBON	100	5%	1/4W
JW99	1-247-807-31	CARBON	100	5%	1/4W
		< COIL >			
L125	1-410-336-11	INDUCTOR	220uH		
L310	1-410-467-11	INDUCTOR	5.6uH		
		< TRANSISTOR >			
Q501	8-729-049-79	TRANSISTOR	RT1P137S-TP		
Q502	8-729-900-80	TRANSISTOR	BA1A4M-TP		
		< RESISTOR >			
R123	1-247-807-31	CARBON	100	5%	1/4W
R132	1-247-876-11	CARBON	75K	5%	1/4W
R133	1-247-876-11	CARBON	75K	5%	1/4W
R134	1-249-417-11	CARBON	1K	5%	1/4W
R401	1-247-807-31	CARBON	100	5%	1/4W
R402	1-247-807-31	CARBON	100	5%	1/4W
R403	1-247-807-31	CARBON	100	5%	1/4W
R409	1-249-429-11	CARBON	10K	5%	1/4W
R411	1-247-807-31	CARBON	100	5%	1/4W
R412	1-249-429-11	CARBON	10K	5%	1/4W
R413	1-249-411-11	CARBON	330	5%	1/4W
R417	1-249-429-11	CARBON	10K	5%	1/4W
R419	1-247-807-31	CARBON	100	5%	1/4W
R424	1-249-421-11	CARBON	2.2K	5%	1/4W
R425	1-249-425-11	CARBON	4.7K	5%	1/4W
R426	1-247-887-00	CARBON	220K	5%	1/4W
R427	1-249-425-11	CARBON	4.7K	5%	1/4W
R428	1-249-441-11	CARBON	100K	5%	1/4W
R429	1-247-807-31	CARBON	100	5%	1/4W
R430	1-247-807-31	CARBON	100	5%	1/4W
R432	1-247-807-31	CARBON	100	5%	1/4W
R433	1-247-807-31	CARBON	100	5%	1/4W

MAIN | **MOTOR** | **PANEL (L)** | **PANEL (R)** | **TRAY SENSOR**

Ref. No.	Part No.	Description			Remark
R435	1-247-807-31	CARBON	100	5%	1/4W
R436	1-247-807-31	CARBON	100	5%	1/4W
R437	1-247-807-31	CARBON	100	5%	1/4W
R438	1-247-807-31	CARBON	100	5%	1/4W
R440	1-247-807-31	CARBON	100	5%	1/4W
R441	1-249-429-11	CARBON	10K	5%	1/4W
R442	1-247-807-31	CARBON	100	5%	1/4W
R443	1-247-807-31	CARBON	100	5%	1/4W
R444	1-247-807-31	CARBON	100	5%	1/4W
R445	1-247-807-31	CARBON	100	5%	1/4W
R446	1-247-807-31	CARBON	100	5%	1/4W
R447	1-247-807-31	CARBON	100	5%	1/4W
R448	1-247-807-31	CARBON	100	5%	1/4W
R449	1-247-807-31	CARBON	100	5%	1/4W
R450	1-247-807-31	CARBON	100	5%	1/4W
R451	1-247-807-31	CARBON	100	5%	1/4W
R452	1-247-807-31	CARBON	100	5%	1/4W
R453	1-247-807-31	CARBON	100	5%	1/4W
R456	1-249-429-11	CARBON	10K	5%	1/4W
R457	1-249-429-11	CARBON	10K	5%	1/4W
R459	1-247-807-31	CARBON	100	5%	1/4W
R460	1-249-429-11	CARBON	10K	5%	1/4W
R465	1-249-407-11	CARBON	150	5%	1/4W
R469	1-249-407-11	CARBON	150	5%	1/4W
R473	1-249-407-11	CARBON	150	5%	1/4W
R477	1-249-407-11	CARBON	150	5%	1/4W
R480	1-249-441-11	CARBON	100K	5%	1/4W
R481	1-249-407-11	CARBON	150	5%	1/4W
R482	1-249-429-11	CARBON	10K	5%	1/4W
R483	1-249-429-11	CARBON	10K	5%	1/4W
R484	1-247-807-31	CARBON	100	5%	1/4W
R485	1-247-807-31	CARBON	100	5%	1/4W
R486	1-247-807-31	CARBON	100	5%	1/4W
R487	1-247-807-31	CARBON	100	5%	1/4W
R489	1-247-807-31	CARBON	100	5%	1/4W
R490	1-247-807-31	CARBON	100	5%	1/4W
R491	1-247-807-31	CARBON	100	5%	1/4W
R492	1-249-425-11	CARBON	4.7K	5%	1/4W
R493	1-249-407-11	CARBON	150	5%	1/4W
R494	1-247-807-31	CARBON	100	5%	1/4W
R495	1-247-807-31	CARBON	100	5%	1/4W
R496	1-249-429-11	CARBON	10K	5%	1/4W
R497	1-247-807-31	CARBON	100	5%	1/4W
R500	1-249-429-11	CARBON	10K	5%	1/4W
		< VIBRATOR >			
X401	1-781-107-21	VIBRATOR, CERAMIC (16MHz)			

****

	1-678-461-11	MOTOR BOARD			
		**********			
		< CAPACITOR >			
C721	1-162-306-11	CERAMIC	0.01uF	30%	16V

****

Ref. No.	Part No.	Description			Remark
	1-680-995-11	PANEL (L) BOARD			
		**********			
		< LED >			
D701	8-719-057-97	LED SEL5923A-TP15 (❚❚)			
D702	8-719-058-03	LED SEL5423E-TP15 (►)			
D703	8-719-057-97	LED SEL5923A-TP15 (③)			
D704	8-719-057-97	LED SEL5923A-TP15 (②)			
D705	8-719-057-97	LED SEL5923A-TP15 (①)			
		< RESISTOR >			
R710	1-249-410-11	CARBON	270	5%	1/4W
R711	1-249-411-11	CARBON	330	5%	1/4W
R712	1-249-413-11	CARBON	470	5%	1/4W
R713	1-249-414-11	CARBON	560	5%	1/4W
R714	1-249-415-11	CARBON	680	5%	1/4W
R715	1-249-417-11	CARBON	1K	5%	1/4W
R716	1-249-418-11	CARBON	1.2K	5%	1/4W
		< SWITCH >			
S711	1-771-410-21	SWITCH, TACTILE (◄◄)			
S712	1-771-410-21	SWITCH, TACTILE (►►)			
S713	1-771-410-21	SWITCH, TACTILE (►►I)			
S714	1-771-410-21	SWITCH, TACTILE (I◄◄)			
S715	1-771-410-21	SWITCH, TACTILE (■)			
S716	1-771-410-21	SWITCH, TACTILE (❚❚)			
S717	1-771-410-21	SWITCH, TACTILE (►)			

****

	1-680-996-11	PANEL (R) BOARD			
		**********			
		< RESISTOR >			
R700	1-249-410-11	CARBON	270	5%	1/4W
R701	1-249-411-11	CARBON	330	5%	1/4W
R702	1-249-413-11	CARBON	470	5%	1/4W
R703	1-249-414-11	CARBON	560	5%	1/4W
R704	1-249-415-11	CARBON	680	5%	1/4W
R705	1-249-417-11	CARBON	1K	5%	1/4W
R706	1-249-418-11	CARBON	1.2K	5%	1/4W
R707	1-249-420-11	CARBON	1.8K	5%	1/4W
		< SWITCH >			
S701	1-771-410-21	SWITCH, TACTILE (DISC 3)			
S702	1-771-410-21	SWITCH, TACTILE (DISC 2)			
S703	1-771-410-21	SWITCH, TACTILE (DISC1)			
S704	1-771-410-21	SWITCH, TACTILE (⏏ (DISC 1))			
S705	1-771-410-21	SWITCH, TACTILE (⏏ (DISC 2))			
S706	1-771-410-21	SWITCH, TACTILE (⏏ (DISC 3))			
S707	1-771-410-21	SWITCH, TACTILE (REPEAT)			
S708	1-771-410-21	SWITCH, TACTILE (PLAY MODE)			

****

	1-678-457-11	TRAY SENSOR BOARD			
		**********			
		< CAPACITOR >			
C731	1-164-159-11	CERAMIC	0.1uF		50V

TRAY SENSOR

Ref. No.	Part No.	Description			Remark
		< PHOTO SENSOR >			
IC731	8-749-081-01	PHOTO SENSOR	DG-264		
IC732	8-749-081-01	PHOTO SENSOR	DG-264		
IC733	8-749-081-01	PHOTO SENSOR	DG-264		
		< RESISTOR >			
R731	1-247-876-11	CARBON	75K	5%	1/4W
R732	1-249-408-11	CARBON	180	5%	1/4W
R733	1-247-876-11	CARBON	75K	5%	1/4W
R734	1-249-408-11	CARBON	180	5%	1/4W
R735	1-247-876-11	CARBON	75K	5%	1/4W
R736	1-249-408-11	CARBON	180	5%	1/4W
**********					
		MISCELLANEOUS			
		**********			
9	1-823-055-11	WIRE (FLAT TYPE) (21 CORE)			
11	1-757-633-11	CORD (WITH CONNECTOR) 17P			
571	X-4952-971-2	MOTOR ASSY			
605	1-757-710-11	WIRE (FLAT TYPE) (16 CORE)			
⚠606	A-4735-188-A	BU-30 (60) ASSY			
M721	1-541-632-12	MOTOR, DC (LOADING)			

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

MEMO

REVISION HISTORY

Clicking the version allows you to jump to the revised page.
Also, clicking the version at the upper right on the revised page allows you to jump to the next revised page.

Ver.	Date	Description of Revision
1.0	2001.04	New

SS-S3/S9

SERVICE MANUAL

Ver 1.1 2002.07

Photo: SS-S3

US Model
Canadian Model
AEP Model
UK Model
E Model
Australian Model

- SS-S3 are speaker system in MHC-S3.
- SS-S9 are speaker system in MHC-S7AV, MHC-SV7AV.

SPECIFICATIONS

SS-S3/S9

Speaker system	3-way, 3-unit, bass-reflex type, magnetically shielded type
Speaker units	
Woofer:	15 cm, cone type
Subwoofer:	15 cm, cone type
Tweeter:	2.8 cm, dome type
Nominal impedance	6 ohms
Dimensions (w/h/d)	Approx. 235 x 470 x 265 mm
Mass	Approx. 7.3 kg net per speaker

Design and specifications are subject to change without notice.

SPEAKER SYSTEM

9-873-835-12
2002G0500-1
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Home Audio Company
Published by Sony Engineering Corporation

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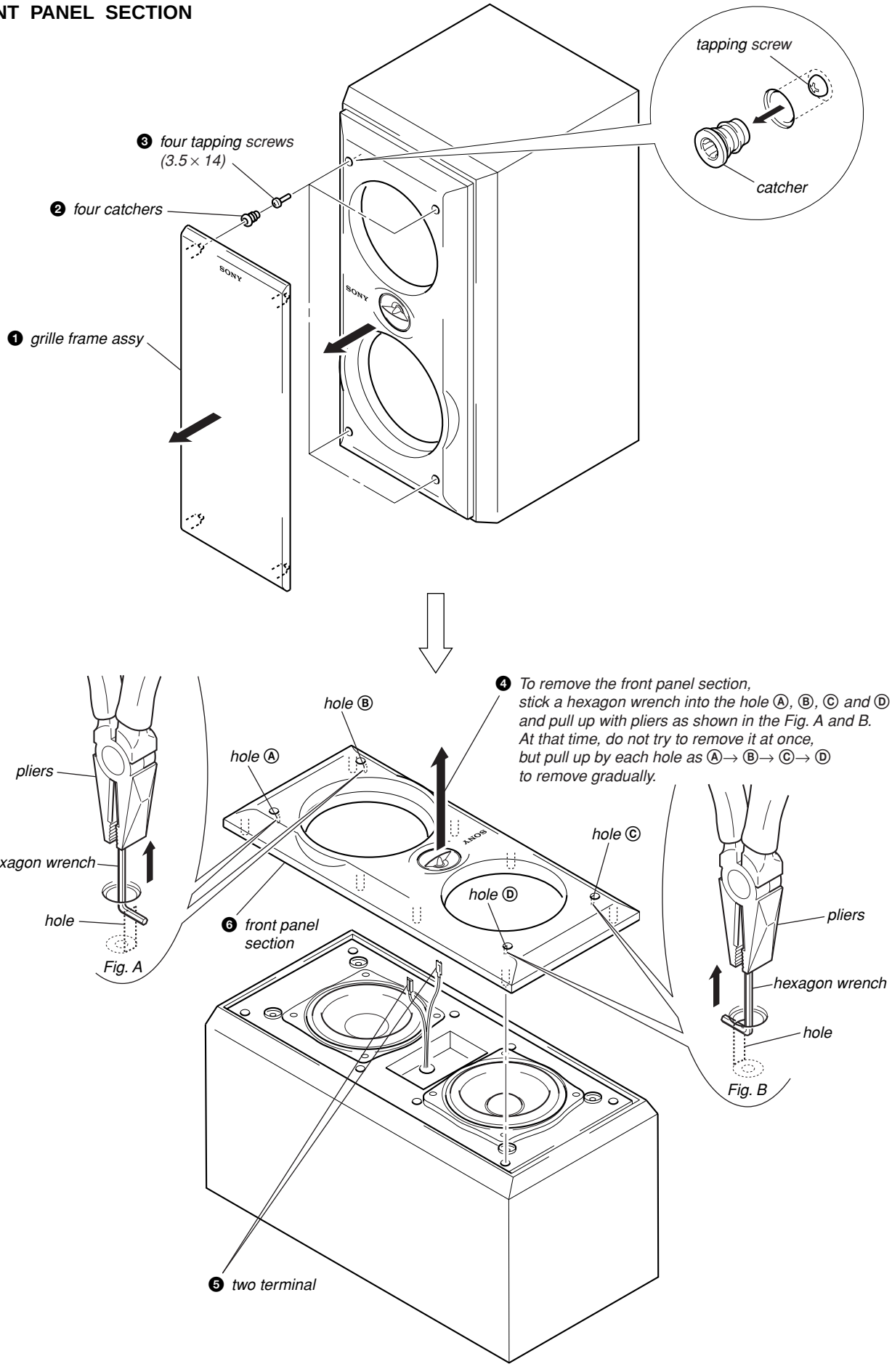
DISASSEMBLY

Note: Follow the disassembly procedure in the numerical order given.

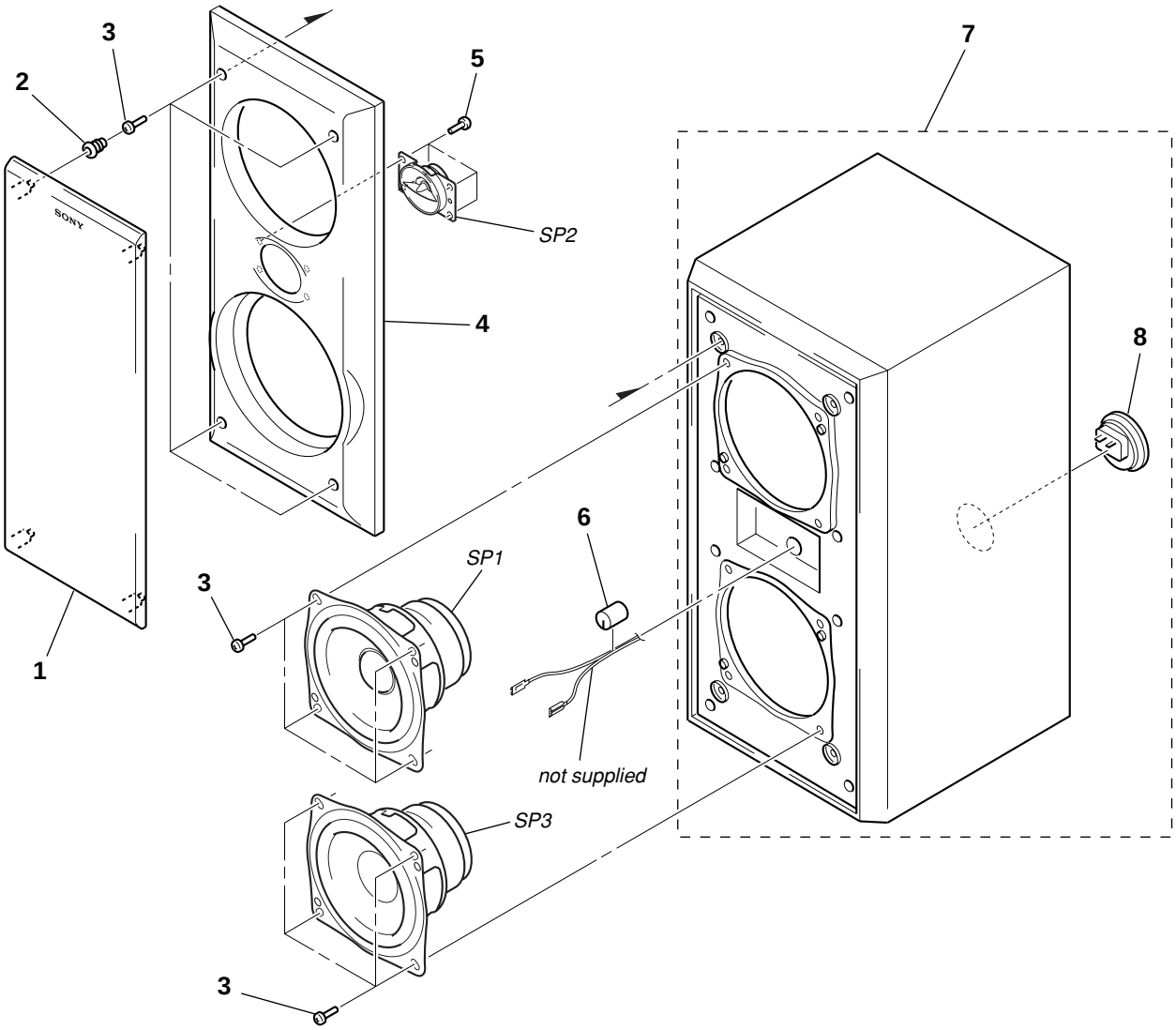
FRONT PANEL SECTION


tapping screw
catcher
❸ four tapping screws (3.5 × 14)
❷ four catchers
❶ grille frame assy
SONY
❹ To remove the front panel section, stick a hexagon wrench into the hole Ⓐ, Ⓑ, Ⓒ and Ⓓ and pull up with pliers as shown in the Fig. A and B. At that time, do not try to remove it at once, but pull up by each hole as Ⓐ→ Ⓑ→ Ⓒ→ Ⓓ to remove gradually.
hole Ⓑ
hole Ⓐ
hole Ⓒ
hole Ⓓ
pliers
hexagon wrench
hole
Fig. A
❻ front panel section
pliers
hexagon wrench
hole
Fig. B
❺ two terminal

EXPLODED VIEWS AND PARTS LIST

NOTE:

- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Color Indication of Appearance Parts
  Example:
  KNOB, BALANCE (WHITE) . . . (RED)
  ↑ ↑
  Parts Color Cabinet's Color



Ref. No.	Part No.	Description	Remark
1	A-4412-719-A	FRAME ASSY, GRILLE	
2	4-912-253-01	CATCHER	
3	4-874-614-21	SCREW (4) (3.5X14), TAPPING	
4	A-4412-720-A	PANEL ASSY, FRONT (SS-S9)	
4	A-4412-887-A	PANEL ASSY, FRONT (SS-S3)	
5	4-874-614-31	SCREW (4) (3.5X12), TAPPING	
6	4-218-300-01	PACKING (B)	
7	A-4412-886-B	CABINET ASSY, SPEAKER	
8	1-537-332-11	TERMINAL BOARD	
SP1	1-529-979-11	SPEAKER (15cm) (WOOFER)	
SP2	1-529-980-11	SPEAKER (2.5cm) (TWEETER)	
SP3	1-529-978-11	SPEAKER (15cm) (SUB WOOFER)	

Ref. No.	Part No.	Description	Remark
		ACCESSORIES	
		**********	
	1-558-848-11	CORD, SPEAKER	
	4-235-868-11	MANUAL, INSTRUCTION	
		(ENGLISH, FRENCH, GERMAN, SPANISH, DUTCH, SWEDISH, ITALIAN, PORTUGUESE, TURKISH, POLISH, HUNGARIAN, GREEK, FINNISH, DANISH, CZECH, RUSSIAN)	
		(AEP, UK)	

REVISION HISTORY

Clicking the version allows you to jump to the revised page.
Also, clicking the version at the upper right on the revised page allows you to jump to the next revised page.

Ver.	Date	Description of Revision
1.0	2001.04	New
1.1	2002.07	Change of DISASSEMBLY of Front Panel Section. (SPM-02051)

TA-S7AV

SERVICE MANUAL

Ver 1.0 2001.04

AEP Model
UK Model
E Model
Australian Model

TA-S7AV is the Amplifier section in MHC-S7AV.

SPECIFICATIONS

Amplifier section

European model:
Front Speaker:
DIN power output (rated) 95 + 95 watts (6 ohms at 1 kHz, DIN)
Continuous RMS power output (reference) 120 + 120 watts (6 ohms at 1 kHz, 10% THD)
Music power output (reference) 200 + 200 watts (6 ohms at 1 kHz, 10% THD)
Center Speaker:
DIN power output (rated) 30 watts (8 ohms at 1 kHz, DIN)
Continuous RMS power output (reference) 40 watts (8 ohms at 1 kHz, 10% THD)
Music power output (reference) 75 watts (8 ohms at 1 kHz, 10% THD)
Rear Speaker:
DIN power output (rated) 30 + 30 watts (8 ohms at 1 kHz, DIN)
Continuous RMS power output (reference) 40 + 40 watts (8 ohms at 1 kHz, 10% THD)
Music power output (reference) 75 + 75 watts (8 ohms at 1 kHz, 10% THD)

Other models:
The following measured at AC 120, 220, 240 V, 50/60 Hz
Front Speaker:
DIN power output (rated) 95 + 95 watts (6 ohms at 1 kHz, DIN)
Continuous RMS power output (reference) 120 + 120 watts (6 ohms at 1 kHz, 10% THD)
Center Speaker:
DIN power output (rated) 30 watts (8 ohms at 1 kHz, DIN)
Continuous RMS power output (reference) 40 watts (8 ohms at 1 kHz, 10% THD)
Rear Speaker:
DIN power output (rated) 30 + 30 watts (8 ohms at 1 kHz, DIN)
Continuous RMS power output (reference) 40 + 40 watts (8 ohms at 1 kHz, 10% THD)

Inputs
VIDEO (AUDIO) IN: (phono jacks) voltage 250 mV, impedance 47 kilohms
MD IN: (phono jacks) voltage 450 mV, impedance 47 kilohms
OPTICAL IN: (Square optical connector jacks, rear panel) wavelength 700 nm
MIC: (Except for European model) (phone jack) sensitivity 1 mV, impedance 10 kilohms

Outputs
MD OUT: (phono jacks) voltage 250 mV impedance 1 kilohms
PHONES: (stereo mini jack) accepts headphones of 8 ohms or more
FRONT SPEAKER: accepts impedance of 6 to 16 ohms
REAR SPEAKER: accepts impedance of 8 to 16 ohms
CENTER SPEAKER: accepts impedance of 8 to 16 ohms
SUB WOOFER OUT: Voltage 1 V, impedance 1 kilohms

General
Power requirements
European model: 230 V AC, 50/60 Hz
Australian model: 230 – 240 V AC, 50/60 Hz
Mexican model: 120 V AC, 60 Hz
Korean model: 220 V AC, 60 Hz
Power consumption
European model: 300 watts
0.6 watts (during Power Saving Mode)
Other models: 300 watts

Dimensions (w/h/d) Approx. 280 x 128 x 350 mm
Mass Approx. 7.7 kg

Design and specifications are subject to change without notice.

AV AMPLIFIER

9-873-836-11
2001D0500-1
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Sony Corporation
Home Audio Company
Shinagawa Tec Service Manual Production Group

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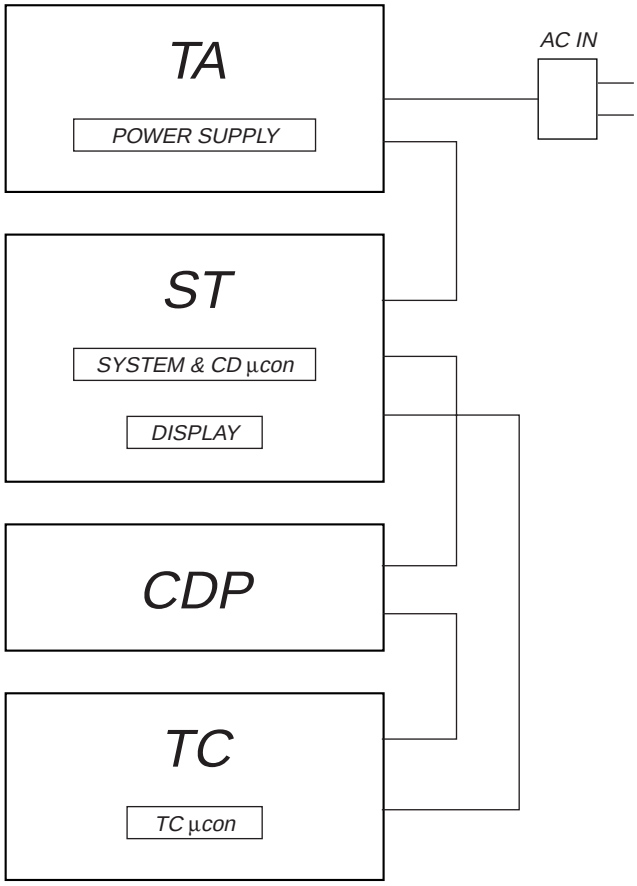
SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

SECTION 1
SERVICING NOTES

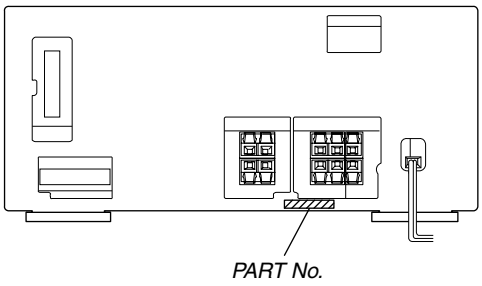
This set is a component of the MHC-S7AV.
The MHC-S7AV system configuration is as shown below, and therefore it does not operate normally unless all four components are connected.
In performing the repair, connect all components with the system cables.
Note: The precaution to the users is described on the label stuck on the back panel (CD player) and in the troubleshooting section in the Operation Manual.

System Configuration:



MODEL IDENTIFICATION

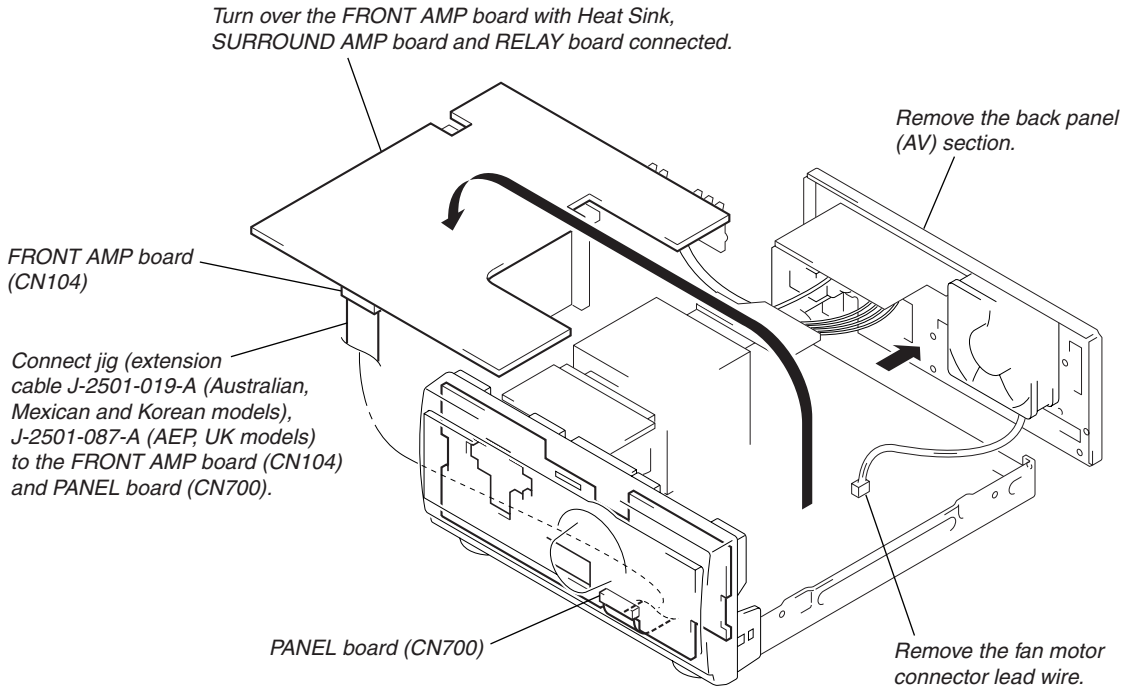
– Back Panel –



Model	PART No.
AEP model	4-232-337-0
UK model	4-232-337-3
Australian model	4-232-337-5
Mexican model	4-232-337-7
Korean model	4-232-337-8

FRONT AMP BOARD SERVICE POSITION

In checking the FRONT AMP board, prepare jig
(extension cable J-2501-019-A: 1.25 mm Pitch, 25 core, Length 300 mm) (Australian, Mexican and Korean models)
(extension cable J-2501-087-A: 1.25 mm Pitch, 23 core, Length 300 mm) (AEP, UK models)
(Fig A)


Turn over the FRONT AMP board with Heat Sink, SURROUND AMP board and RELAY board connected.
Remove the back panel (AV) section.
FRONT AMP board (CN104)
Connect jig (extension cable J-2501-019-A (Australian, Mexican and Korean models), J-2501-087-A (AEP, UK models) to the FRONT AMP board (CN104) and PANEL board (CN700).
PANEL board (CN700)
Remove the fan motor connector lead wire.

(Fig A)

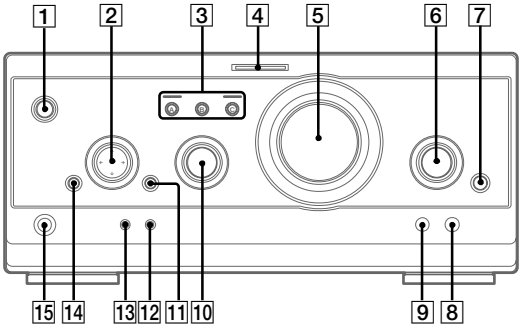
SECTION 2
GENERAL

This section is extracted from instruction manual.

Parts Identification

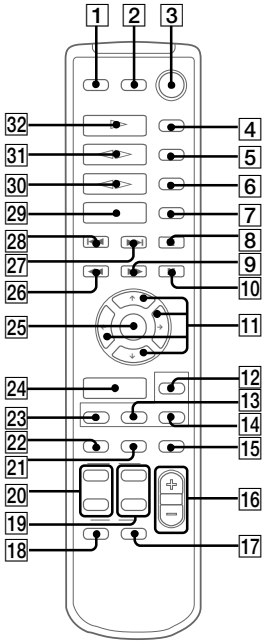
The items are arranged in alphabetical order.
Refer to the pages indicated in parentheses ( ) for details.

Main unit



CINEMA STUDIO A–C 3 (24)
DIGITAL 7 (31, 35)
ENTER/↑/↓/←/→ 2 (10, 12, 13, 15, 21, 22, 26–30)
EQ 11 (27)
EQ ON/OFF 12 (10, 27)
FILE SELECT 10 (23, 28)
FUNCTION 6 (10, 14, 15, 20, 21, 31)
MIC jack (Except for European model) 9 (31)
MIC LEVEL (Except for European model) 8 (31)
MULTI CHANNEL DECODING indicator 4 (25)
PHONES jack 15
SET UP 13 (10, 12, 26, 28, 29)
SUR 14 (25)
VOLUME 5
I/⏻ (power) 1 (9, 10, 17, 35)

Remote Control



CD ▷ 32 (14, 15)
CHECK 5 (15)
CLEAR 6 (15)
CLOCK/TIMER SELECT 17 (30)
CLOCK/TIMER SET 18 (13, 21, 29)
DBFB 15 (23)
DISPLAY 22 (13, 16, 18, 29, 35)
D.SKIP 4 (14)
ENTER 25 (10, 12, 13, 15, 17, 18, 21, 22, 26–30)
EQ 13 (27)
EQ ON/OFF 14 (10, 28)
FUNCTION 24 (10, 14, 15, 20, 21, 31)
GROOVE 21 (23)
SET UP 12 (10, 12, 26, 28, 29)
SLEEP 7 (29)
SUR 23 (25)
TAPE A ◁I▷ 31 (19, 35)
TAPE B ◁I▷ 30 (19, 20, 35)
TUNER/BAND 29 (17)
TUNING + 9 (17)
TUNING – 26 (17)
TV CH +/– 19
TV VOL +/– 20
TV I/⏻ 2
TV/VIDEO 1
VOL +/– 16

BUTTON DESCRIPTIONS

I/⏻ (power) 3
II (pause) 10
■ (stop) 8
I◀◀ (go back) 28
▶▶I (go forward) 27
◀◀ (rewind) 26
▶▶ (fast forward) 9
↑/↓/←/→ 11

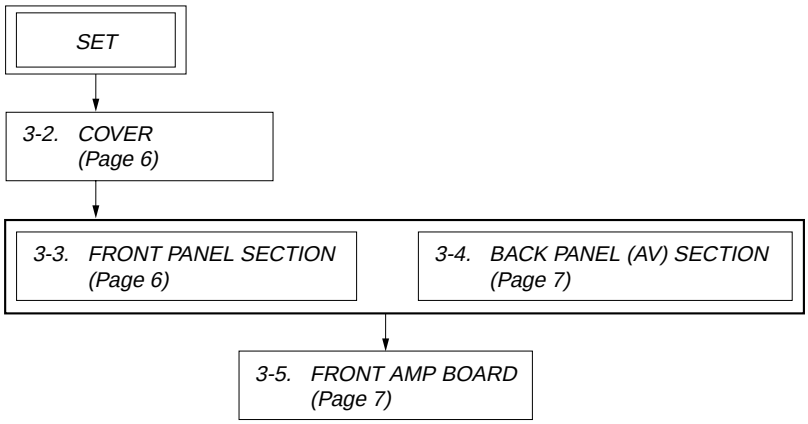
SECTION 3
DISASSEMBLY

• This set can be disassembled in the order shown below.

3-1. DISASSEMBLY FLOW

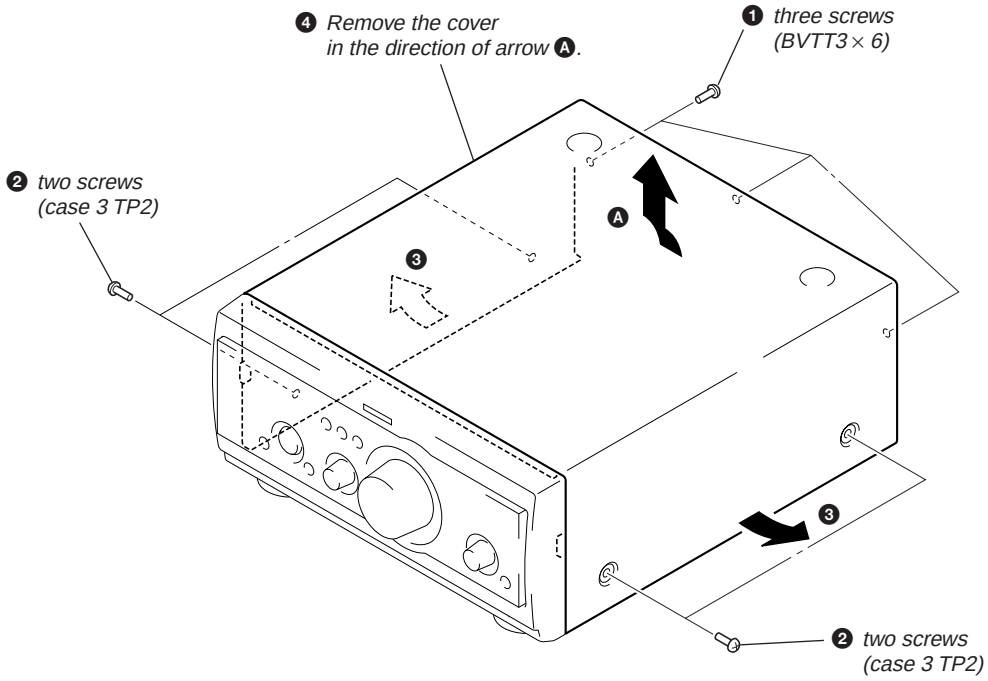
Note 1: *The process described in* ▣ *can be performed in any order.*

Note 2: *Without completing the process described in* ▣*, the next process can not be performed.*

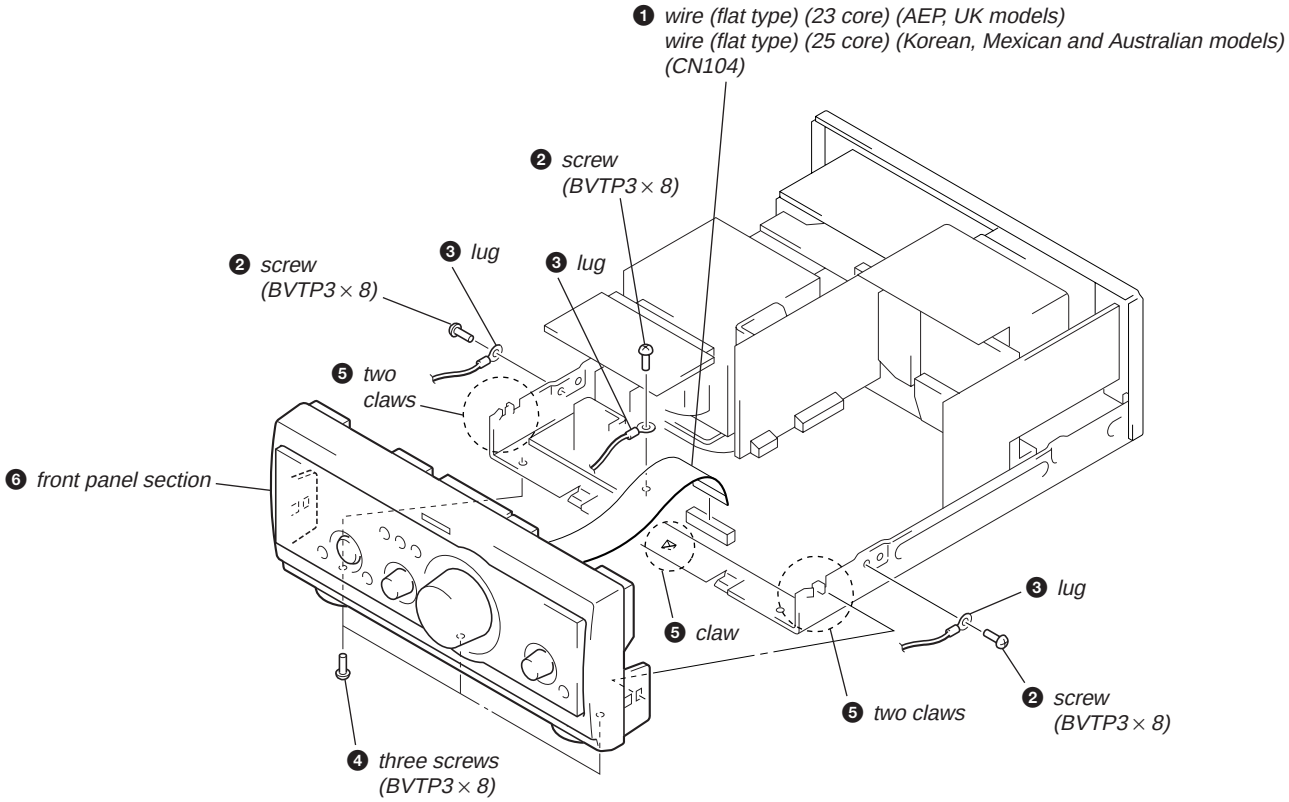


Note: Follow the disassembly procedure in the numerical order given.

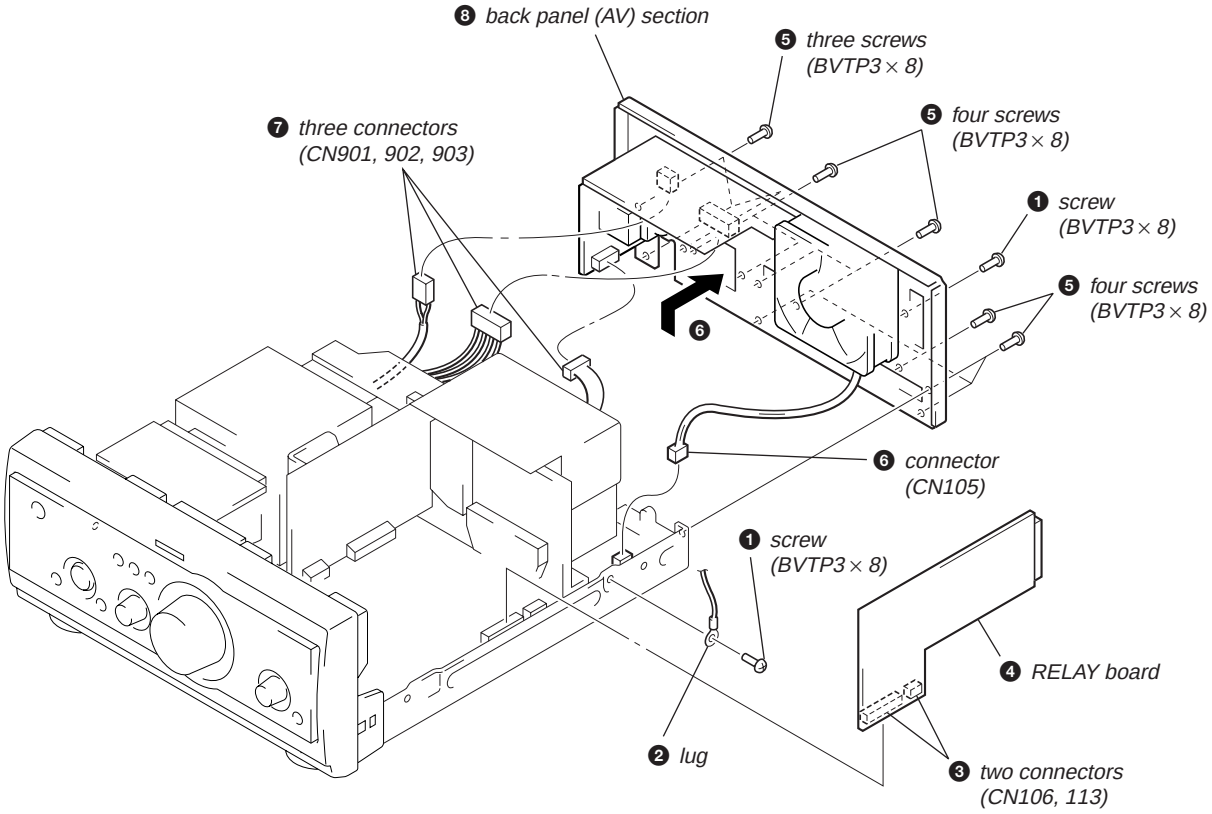
3-2. COVER



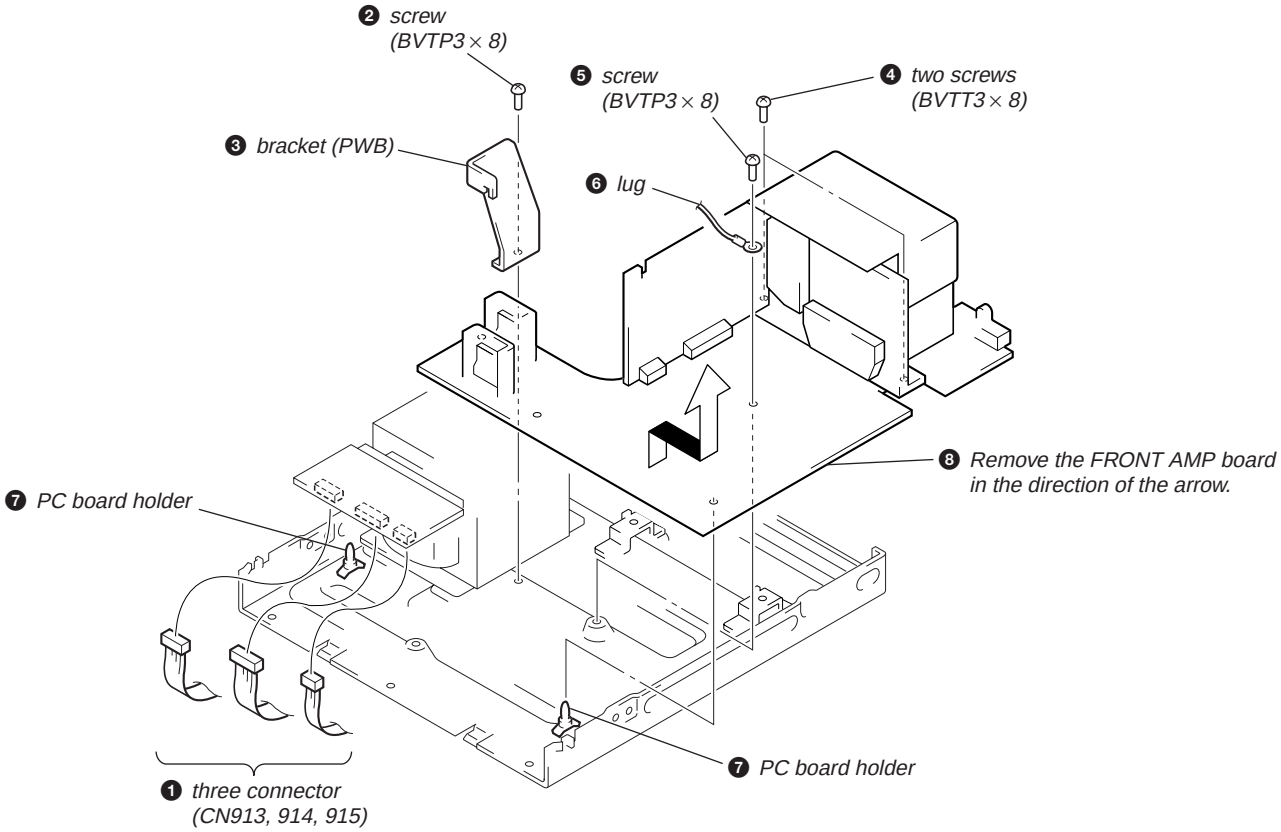
3-3. FRONT PANEL SECTION


❶ wire (flat type) (23 core) (AEP, UK models)
wire (flat type) (25 core) (Korean, Mexican and Australian models)
(CN104)
❷ screw (BVTP3 × 8)
❸ lug
❸ lug
❷ screw (BVTP3 × 8)
❺ two claws
❻ front panel section
❸ lug
❺ claw
❺ two claws
❷ screw (BVTP3 × 8)
❹ three screws (BVTP3 × 8)

3-4. BACK PANEL (AV) SECTION


❽ back panel (AV) section
❺ three screws (BVTP3 × 8)
❼ three connectors (CN901, 902, 903)
❺ four screws (BVTP3 × 8)
❶ screw (BVTP3 × 8)
❺ four screws (BVTP3 × 8)
❻
❻ connector (CN105)
❶ screw (BVTP3 × 8)
❹ RELAY board
❷ lug
❸ two connectors (CN106, 113)

3-5. FRONT AMP BOARD


❷ screw (BVTP3 × 8)
❺ screw (BVTP3 × 8)
❹ two screws (BVTT3 × 8)
❸ bracket (PWB)
❻ lug
❽ Remove the FRONT AMP board in the direction of the arrow.
❼ PC board holder
❼ PC board holder
❶ three connector (CN913, 914, 915)

SECTION 4
TEST MODE

Note: Use flowing buttons in the test mode.
no mark : Button of amplifier unit (TA-S7AV)
*1 : Button of tuner unit (ST-S5)
*2 : Button of CD unit (CDP-S3)

[MC Test Mode]

Enter the MC Test Mode

1. Press the [I/⏻] button to turn the power on.
2. While pressing the both [STEREO/MONO] *1 and [CINEMA STUDIO C] buttons, press the [CINEMA STUDIO A] button.
3. "GROOVE" indication blinks on the fluorescent indicator tube in the midst of MC test mode.
4. This mode has two modes (mode 1/mode 2).
5. To change the modes, press three buttons in the same manner as entering this mode (step 2). Each time the step 2 operation is repeated, it changes modes alternately.
6. To distinguish the mode, turn the [VOLUME] knob clockwise or counterclockwise. Then display is shown as follows.
   Mode 1: only "MIN" or "MAX"
   Mode 2: "MIN", "1 to 30" or "MAX"

AMP Test Mode

In the AMP test mode, it operates as follows.

- [VOLUME] knob is turned, it changes display as follows.
  Counterclockwise : VOLUME MIN
  Clockwise : VOLUME MAX
- [FILE SELECT] knob is turned, it changes speaker output mode as follows.

Display of each mode:

Mode No.	Display	
1	L: L	R: R
2	L: SL	R: SR
3	L: LSLC	R: RSRW
4	L: LSLC	R: RSRW
5	L: C	R: W

Details of each mode:

Mode 1 : L-CH : front L-CH
R-CH : front R-CH
Mode 2 : L-CH : rear L-CH
R-CH : rear R-CH
Mode 3 : L-CH : front L-CH, rear L-CH, center
R-CH : front R-CH, rear R-CH, sub woofer
(no LFE, "EQ" indication does not light up on the fluorescent indicator tube of tuner unit)
Mode 4 : L-CH : front L-CH, rear L-CH, center
R-CH : front R-CH, rear R-CH, sub woofer
(LFE on, "EQ" indication lights up on the fluorescent indicator tube of tuner unit)
Mode 5 : L-CH : center
R-CH : sub woofer

Releasing the MC Test Mode

To release from this mode, press the [I/⏻] button or disconnect the power cord.

[GC Test Mode]

Enter the GC Test Mode

Procedure 1:

1. Press the [I/⏻] button to turn the power on.
2. While pressing the both [STEREO/MONO] *1 and [CINEMA STUDIO C] buttons, press the [CLOCK/TIMER] *1 button.
3. LEDs and fluorescent indicator tube are all turned on of all units.

Procedure 2:

1. Press the [I/⏻] button to turn the power on.
2. While pressing the both [PLAY MODE] *2 and [■] *2 buttons, press the [⏏] (DISC 1) *2 button.
3. LEDs and fluorescent indicator tube are all turned on of all units.

Version Display Mode

Procedure:

1. Enter the GC test mode.
2. Each time the [TUNER MEMORY] *1 or [DISC 1] *2 button is pressed, microcomputer or mechanism deck version is displayed of each unit.
3. Press the [TUNING +] *1 or [DISC 3] *2 button to detail is displayed the version.

Key Check Mode

Procedure:

1. Enter the GC test mode.
2. Press the [TUNING –] *1 or [DISC 2] *2 button to set the key check mode.
3. In the key check mode, the fluorescent indicator tube displays "K 0 J 0 V 0". Each time a button is pressed, "K" value increases. However, once a button is pressed, it is no longer taken into account.
   "J" value increases like 1, 2, 3 ... if turn the [FILE SELECT] knob clockwise, or it decreases like 0, 9, 8 ... if turn the JOG dial counterclockwise.
   "V" value increases like 1, 2, 3 ... if turn the [VOLUME] knob clockwise, or it decreases like 0, 9, 8 ... if turn the JOG dial counterclockwise.

Releasing the GC Test Mode

To release from this mode, press three buttons in the same manner as entering this mode or disconnect the power cord.

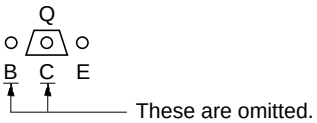
MEMO

SECTION 5
DIAGRAMS

5-1. NOTE FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

Note on Printed Wiring Boards:

- ○——— : parts extracted from the component side.
- ——— : parts extracted from the conductor side.
- △ : internal component.
- ▬ : Pattern from the side which enables seeing.
- Indication of transistor.



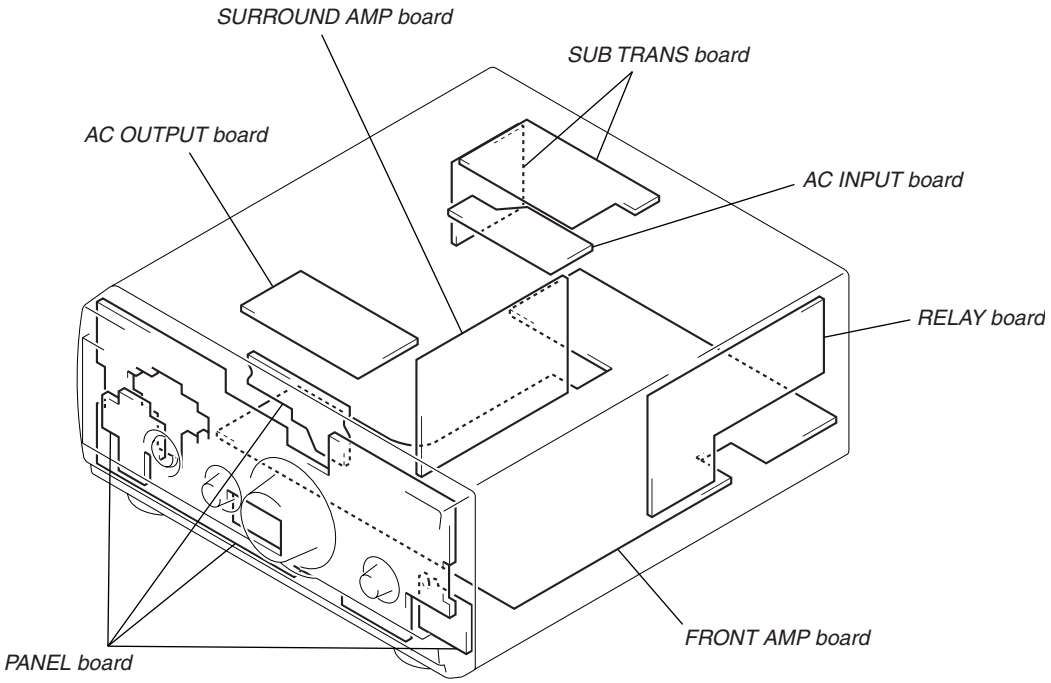
Note on Schematic Diagram:

- All capacitors are in μF unless otherwise noted. pF: μμF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- △ : internal component.
- : nonflammable resistor.
- : fusible resistor.
- : panel designation.

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

- ▬▬ : B+ Line.
- ▬ ▬ ▬ : B– Line.
- Voltages are dc with respect to ground under no-signal conditions.
  no mark : Power on
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Signal path.
  ⇨ : AUDIO
  ▷ : MIC

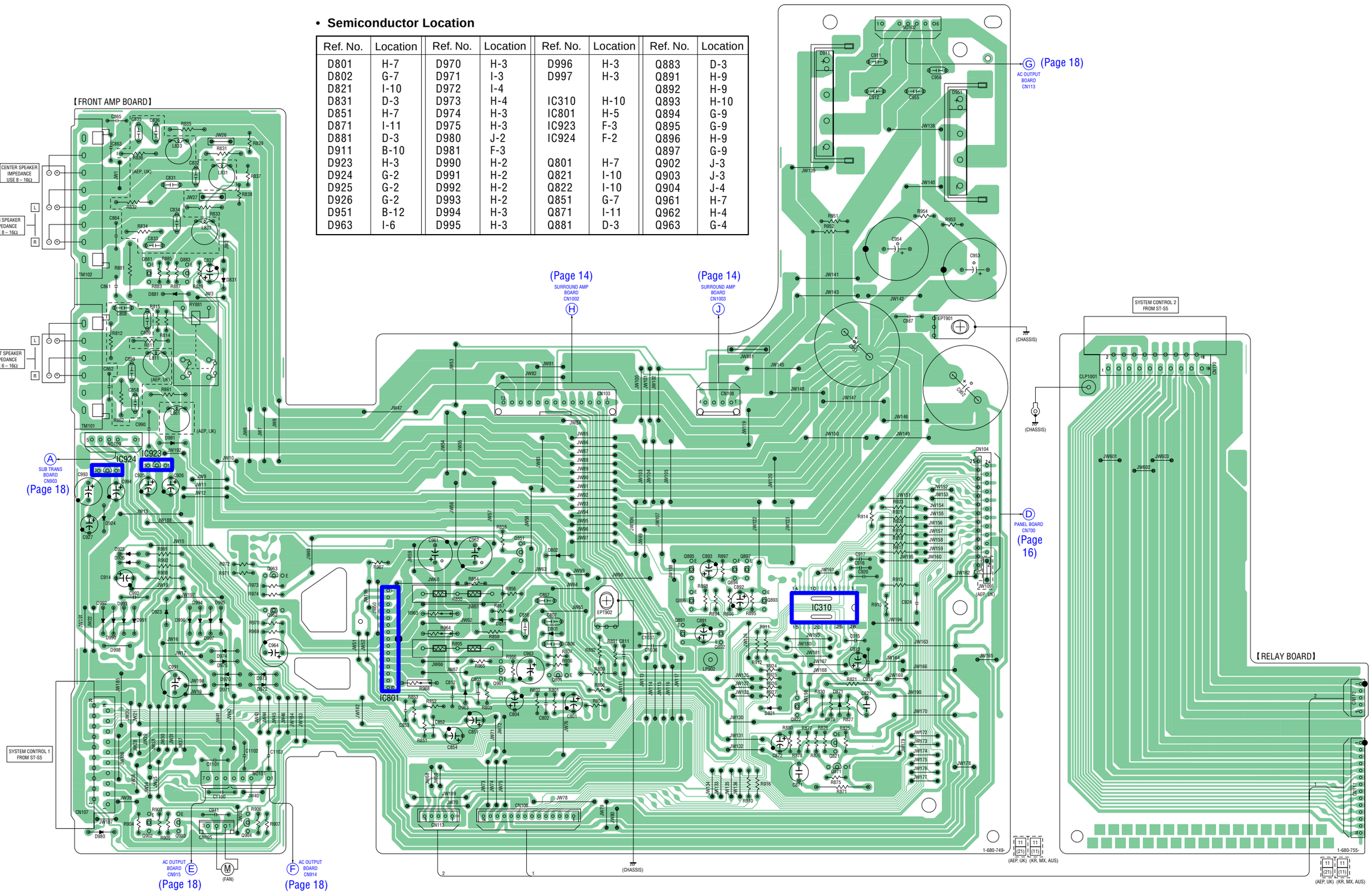
- **Circuit Boards Location**



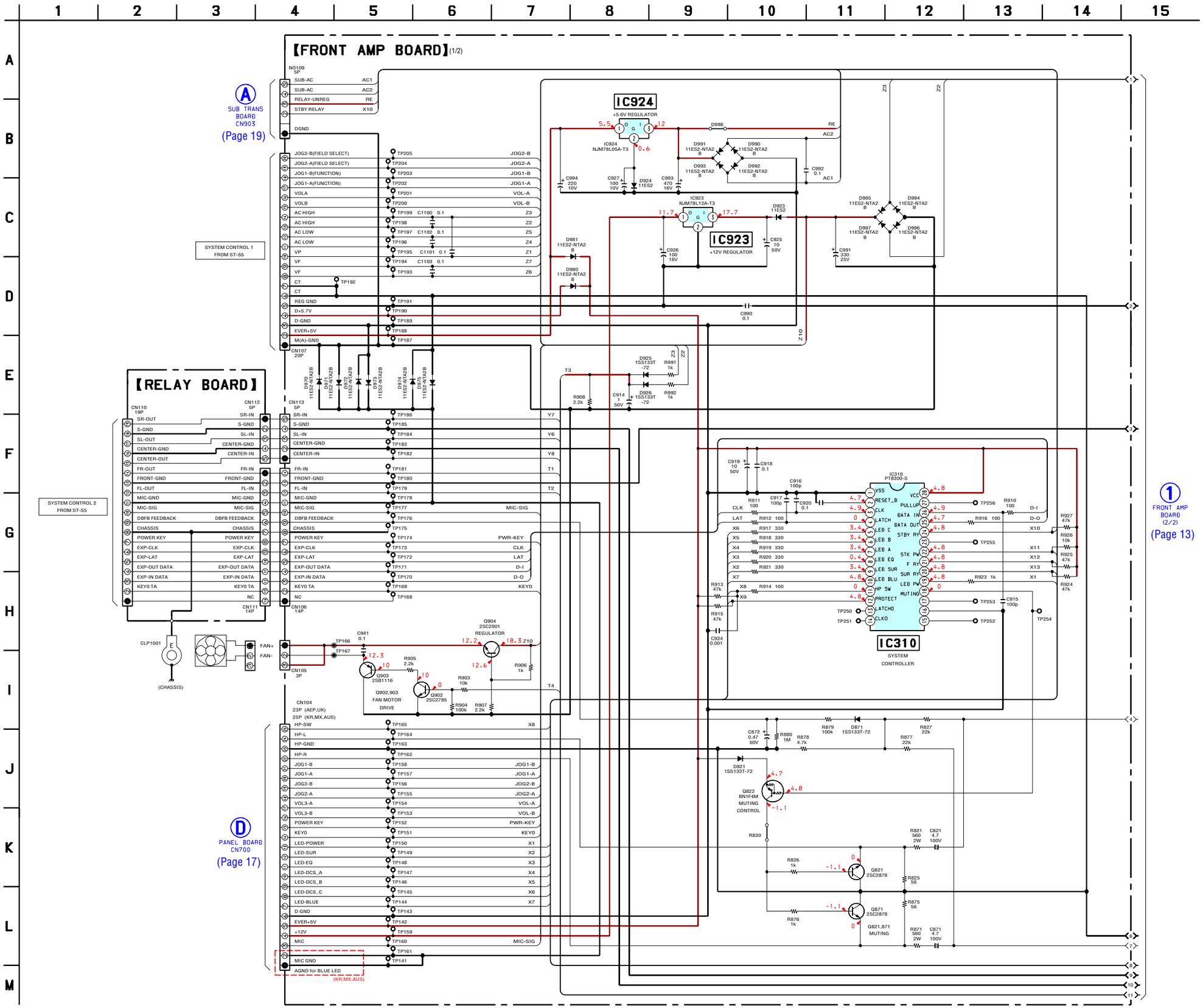
5-2. PRINTED WIRING BOARDS – FRONT AMP Section – • See page 10 for Circuit Boards Location.

• **Semiconductor Location**

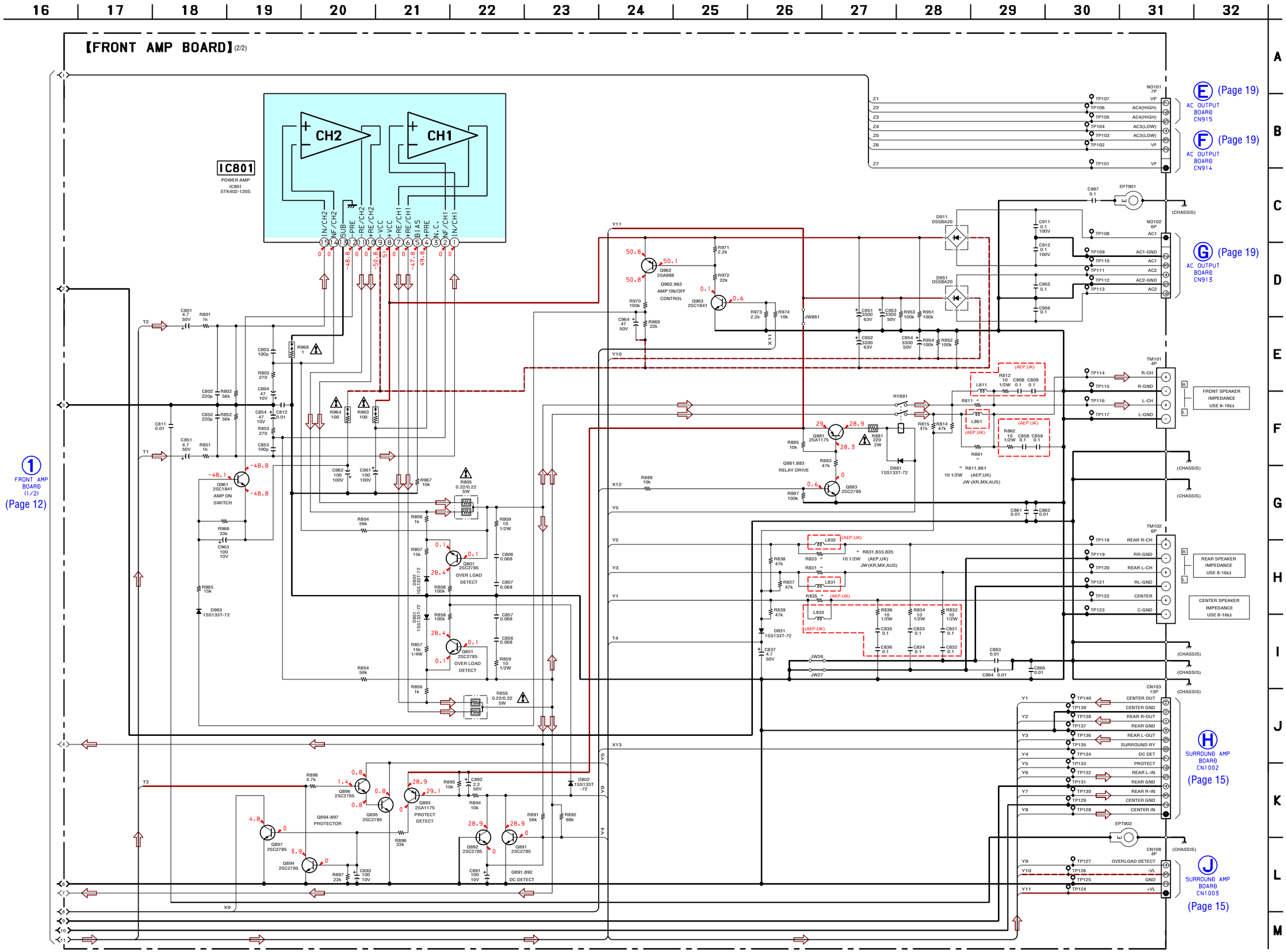
Ref. No.	Location	Ref. No.	Location	Ref. No.	Location	Ref. No.	Location
D801	H-7	D970	H-3	D996	H-3	Q883	D-3
D802	G-7	D971	I-3	D997	H-3	Q891	H-9
D821	I-10	D972	I-4			Q892	H-9
D831	D-3	D973	H-4	IC310	H-10	Q893	H-10
D851	H-7	D974	H-3	IC801	H-5	Q894	G-9
D871	I-11	D975	H-3	IC923	F-3	Q895	G-9
D881	D-3	D980	J-2	IC924	F-2	Q896	H-9
D911	B-10	D981	F-3			Q897	G-9
D923	H-3	D990	H-2	Q801	H-7	Q902	J-3
D924	G-2	D991	H-2	Q821	I-10	Q903	J-3
D925	G-2	D992	H-2	Q822	I-10	Q904	J-4
D926	G-2	D993	H-2	Q851	G-7	Q961	H-7
D951	B-12	D994	H-3	Q871	I-11	Q962	H-4
D963	I-6	D995	H-3	Q881	D-3	Q963	G-4



5-3. SCHEMATIC DIAGRAM – FRONT AMP Section (1/2) –



5-4. SCHEMATIC DIAGRAM – FRONT AMP Section (2/2) –



The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

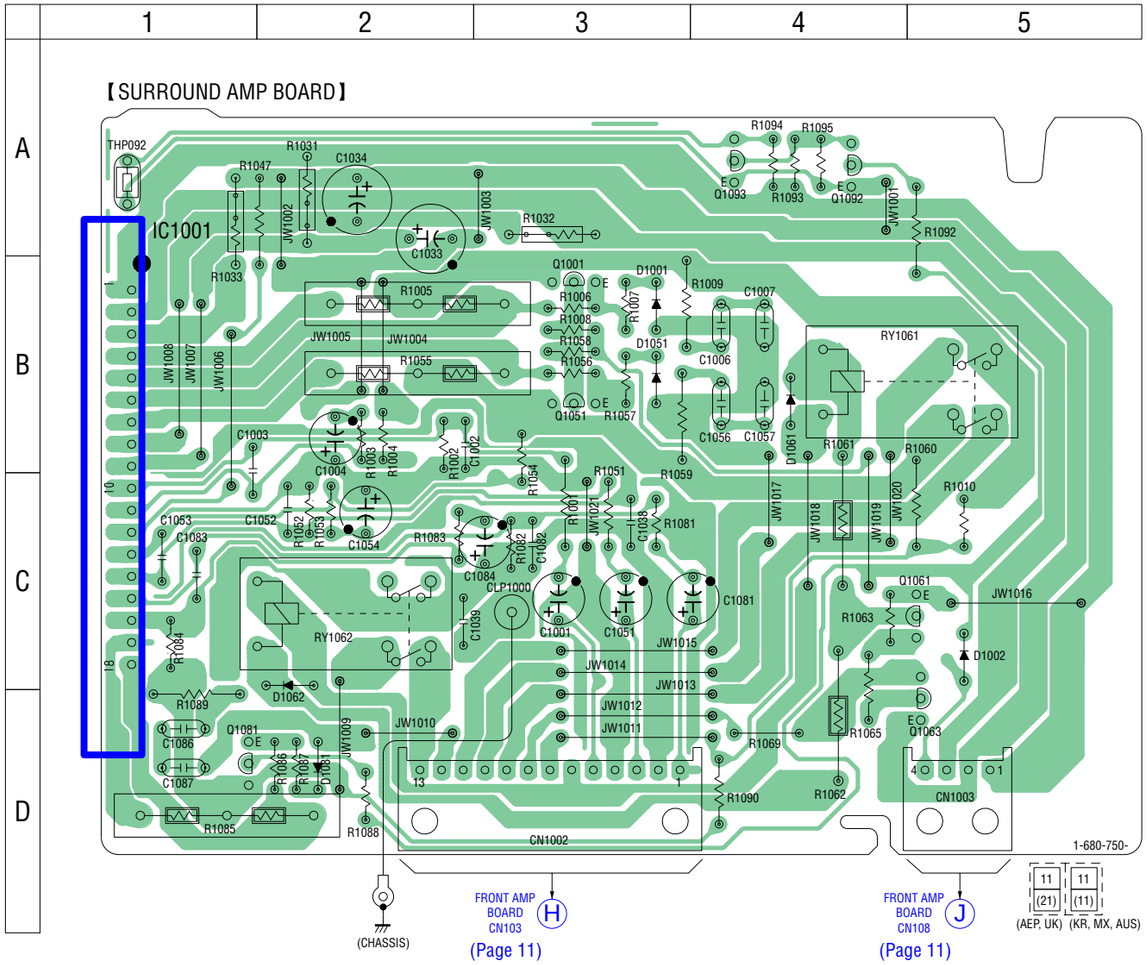
5-5. IC PIN FUNCTION DESCRIPTION

• MAIN BOARD IC301 PT8300-S (SYSTEM CONTROLLER)

Pin No.	Pin Name	I/O	Description
1	VSS	—	Ground terminal
2	RESET_B	I	Reset signal input terminal Not used
3	CLK	I	Serial data transfer clock signal input from the tuner unit (ST-S5)
4	LATCH	I	Serial data latch pulse input from the tuner unit (ST-S5)
5	LED C	O	LED drive signal output of the CINEMA STUDIO C indicator (D706) “L”: LED on
6	LED B	O	LED drive signal output of the CINEMA STUDIO B indicator (D705) “L”: LED on
7	LED A	O	LED drive signal output of the CINEMA STUDIO A indicator (D704) “L”: LED on
8	LED EQ	O	LED drive signal output of the EQ indicator (D703) “L”: LED on
9	LED SUR	O	LED drive signal output of the SUR indicator (D702) “L”: LED on
10	LED BLU	O	LED drive signal output of the MULTI CHANNEL DECODING indicator (D781) “L”: LED on
11	HP SW	I	Headphone detection signal input terminal “H”: headphone on
12	PROTECT	I	Over load detection signal input for speaker output “L”: over load
13	LATCHO	O	Serial data latch pulse output terminal Not used (open)
14	CLKO	O	Serial data transfer clock signal output terminal Not used (open)
15	—	—	Not used (open)
16	—	—	Not used (fixed at “L”)
17	—	—	Not used (open)
18	MUTING	O	Muting on/off control signal output terminal “L”: muting
19	LED PW	O	LED drive signal output of the I/⏻ indicator (D701) “L”: LED on
20	SUR RY	O	Relay drive signal output for the surround speaker (rear and center) protection “H”: on
21	F RY	O	Relay drive signal output for the front speaker protection “H”: on
22	STK PW	O	Power amplifier on/off selection signal output terminal “L”: standby, “H”: on
23	—	—	Not used (open)
24	STBY RY	O	Standby relay drive signal output terminal “L”: standby, “H”: power on
25	DATA OUT	O	Serial data output to the tuner unit (ST-S5)
26	DATA IN	I	Serial data input from the tuner unit (ST-S5)
27	PULLUP	—	Not used (open)
28	VCC	—	Power supply terminal (+5V)

5-6. PRINTED WIRING BOARD – SURROUND AMP Section –

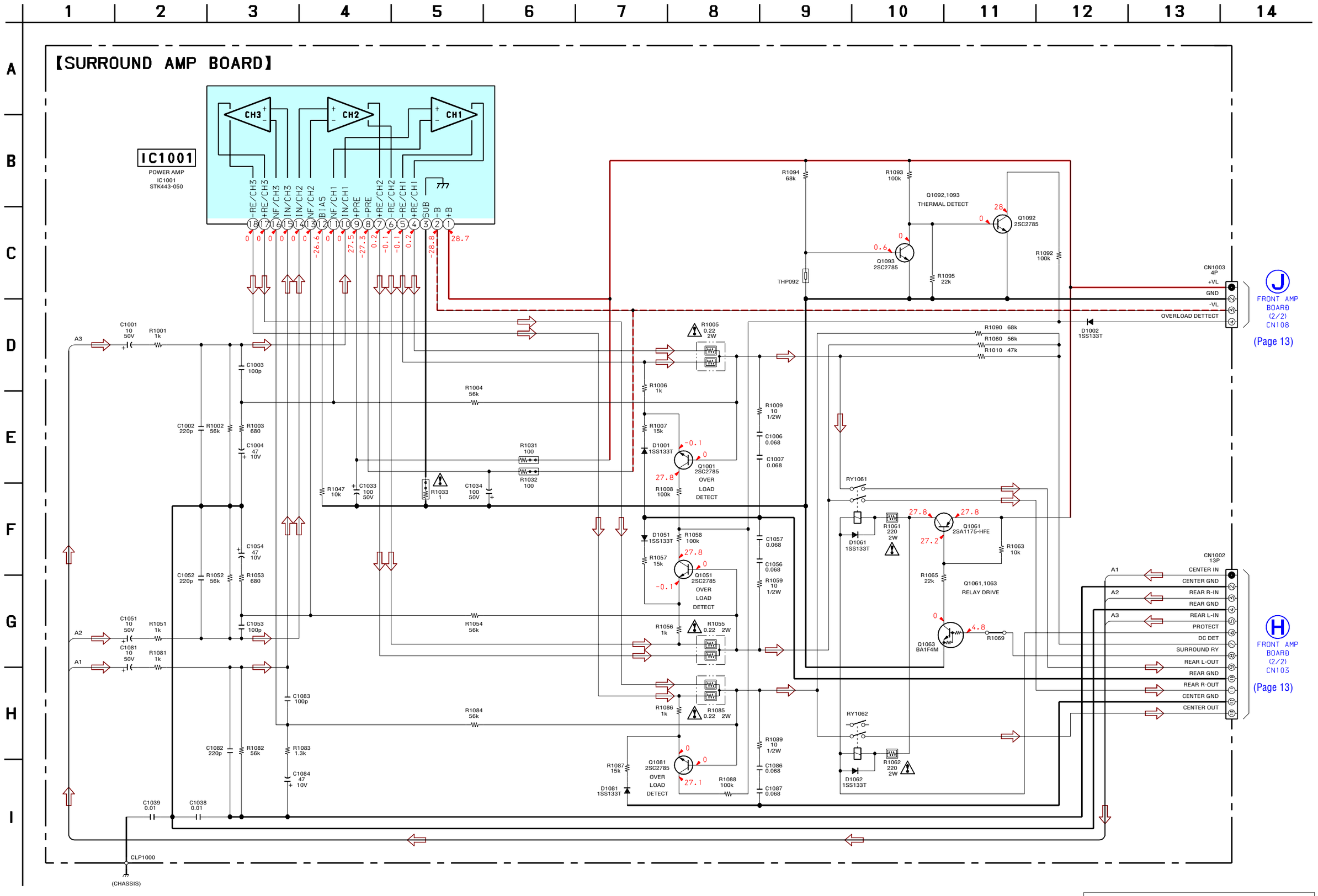
• See page 10 for Circuit Boards Location.



• Semiconductor Location

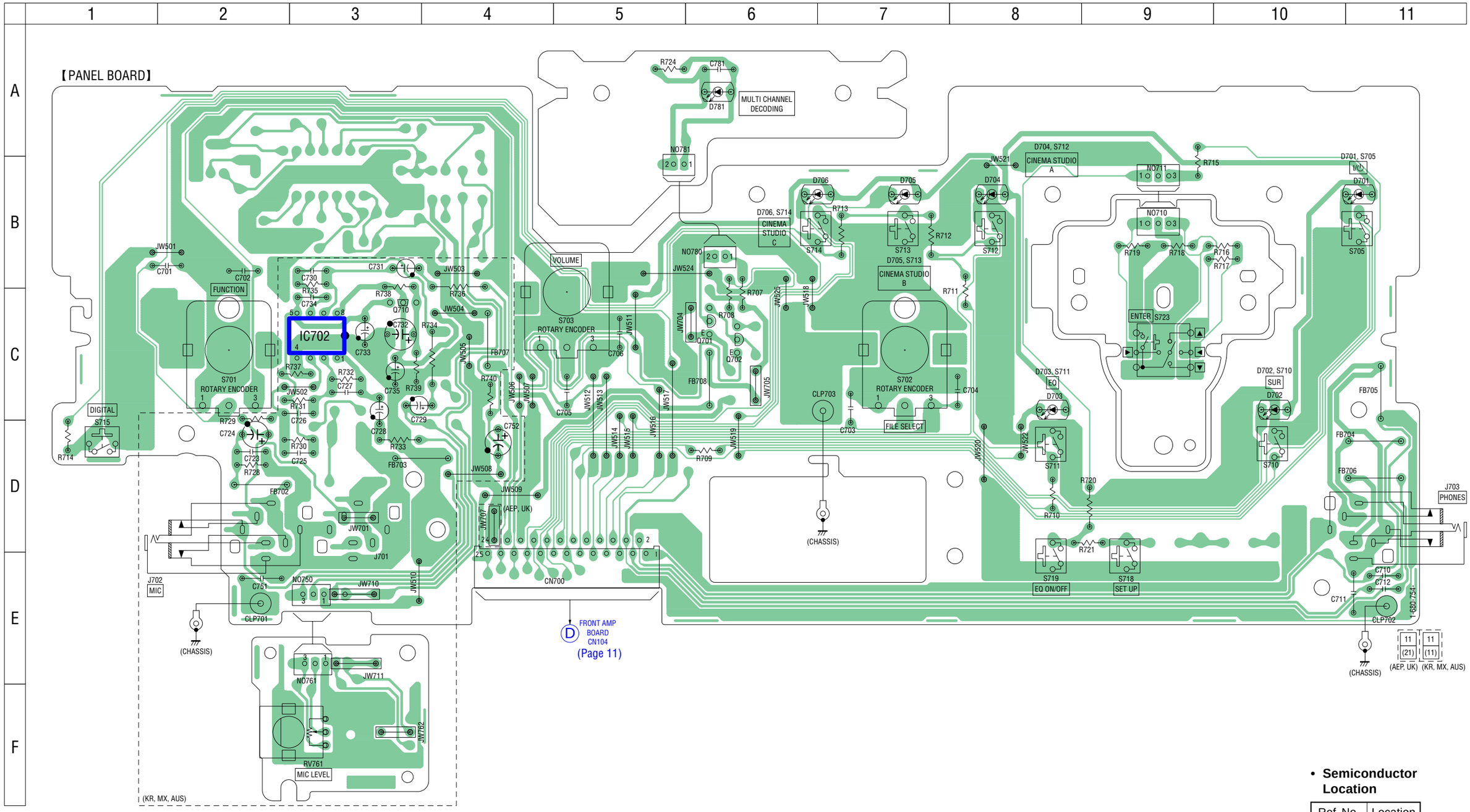
Ref. No.	Location
D1001	B-3
D1002	C-5
D1051	B-3
D1061	B-4
D1062	C-2
D1081	D-2
IC1001	B-1
Q1001	B-3
Q1051	B-3
Q1061	C-5
Q1063	D-5
Q1081	D-1
Q1092	A-4
Q1093	A-4

5-7. SCHEMATIC DIAGRAM – SURROUND AMP Section –



The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

5-8. PRINTED WIRING BOARDS – CONTROL Section – • See page 10 for Circuit Boards Location.



- **Semiconductor Location**

Ref. No.	Location
D701	B-11
D702	C-10
D703	C-8
D704	B-8
D705	B-7
D706	B-6
D781	A-6
IC702	C-3
Q701	C-6
Q702	C-6
Q710	C-3

5-9. SCHEMATIC DIAGRAM – CONTROL Section –

【PANEL BOARD】

S701 FUNCTION ROTARY ENCODER (GND, 1B, 1A)
S702 FILE SELECT ROTARY ENCODER (GND, 2B, 2A)
S703 VOLUME ROTARY ENCODER (3A, GND, 3B)
C701 0.01, C702 0.01, C703 0.01, C704 0.01, C705 0.01, C706 0.01
A6, A5, A4, A3, A2, A1, A9

S723 ENTER
R716 2.2k, R717 2.7k, R718 3.9k, R719 5.6k
NO710 3P, NO711 3P

S705

A8
R709 270, R710 470, R711 560, R712 820, R713 1k, R714 1.2k, R715 1.5k, R720 8.2k, R721 15k
S710 SUR, S711 EQ, S712 A, S713 B, S714 C, S715 DIGITAL, S719 EQ ON/OFF, S718 SET UP
CINEMA STUDIO

(KR,MX,AUS)

J702 MIC
C724 0.22 50V
FB702
R729 1k
C726 47p
IC702 MIC AMP
IC702(1/2) NJM4580D
IC702(2/2) NJM4580D
C730 270p
R735 150k
C734 47p
C731 2.2 50V
R736 100
R732 22k
C727 470p
R734 10k
C728 0.1 50V
C729 2.2 50V
FB707 0μH
R738 10k
Q710 2SC2785 REGULATOR
C725 1000p
R730 100k
R731 1k
R728 10k
C723 0.01
C733 10 16V
R733 100
C735 10 16V
R737 1k
C732 100 10V
R739 10k
R740 100k
C752 10 16V
FB703
CLP701
C751 0.01
(CHASSIS)

NO761 3P
NO750 3P
RV761 50k MIC LEVEL

FB708
JW705
R707 330
D701 SEL5223S -TP15
D702 SEL5923A SUR
D703 SEL5923A EQ
D704 SEL5923A CINEMA STUDIO A
D705 SEL5923A CINEMA STUDIO B
D706 SEL5923A CINEMA STUDIO C
LED-POWER, LED-SUR, LED-EQ, LED-DCS_A, LED-DCS_B, LED-DCS_C, LED-BLUE
R708 100
Q702 BN1F4M Q701,702 LED DRIVE
Q701 BA1A4M
JW704

NO780 2P
NO781 2P
C781 0.01
D781 SEL5E20C
MULTI CHANNEL DECODING

CN700
23P (AEP,UK)
25P (KR,MX,AUS)

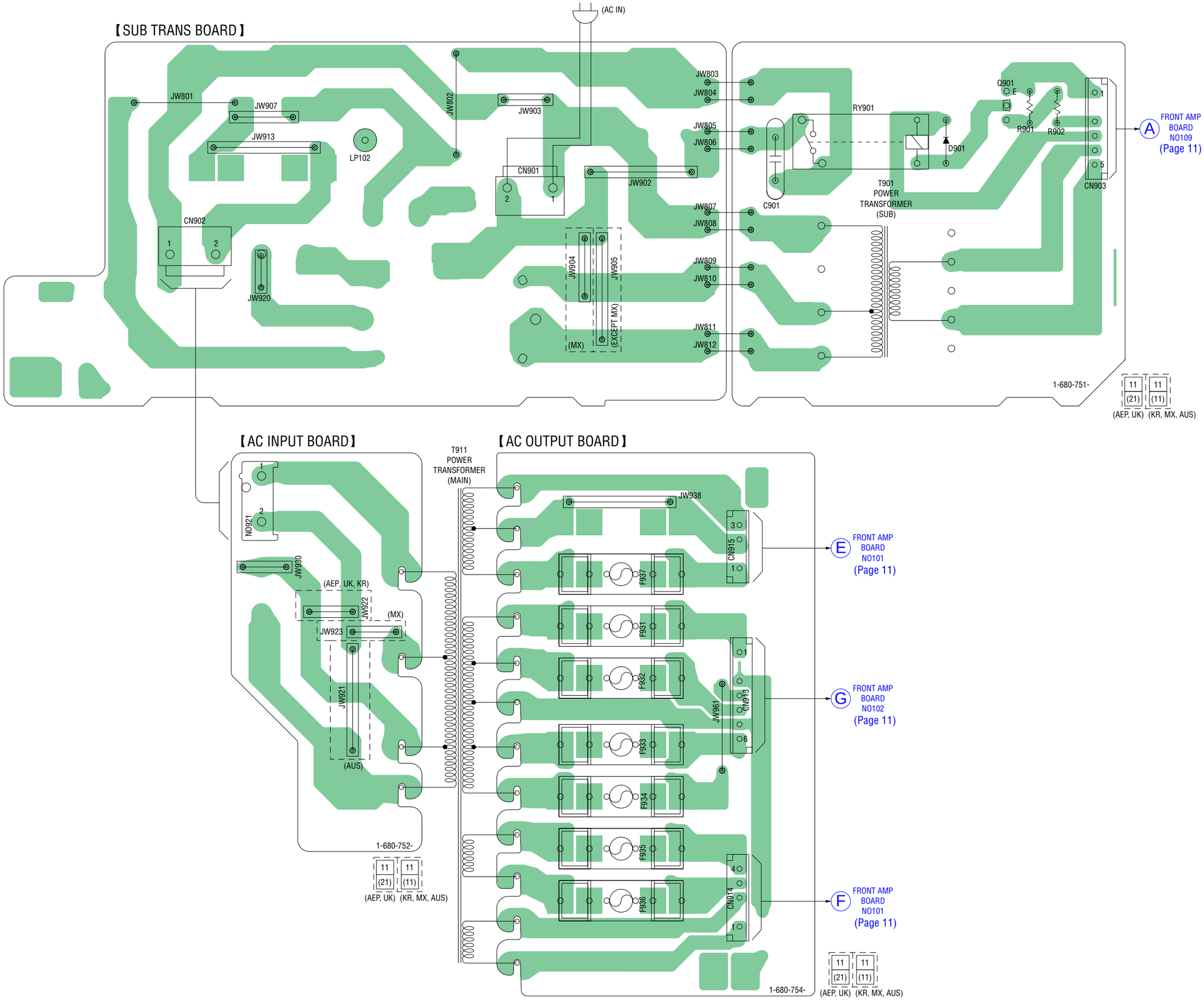
(KR,MX,AUS) AGND for BULUE LED	25
A GND	24
MIC	23
+12V	22
EVER+5V	21
D GND	20
LED-BLUE	19
LED-DCS_C	18
LED-DCS_B	17
LED-DCS_A	16
LED-EQ	15
LED-SUR	14
LED-POWER	13
KEY0	12
POWER KEY	11
VOL3-B	10
VOL3-A	9
JOG2-A	8
JOG2-B	7
JOG1-A	6
JOG1-B	5
HP-R	4
HP-GND	3
HP-L	2
HP-SW	1

LED-BLUE, LED-DCS_C, LED-DCS_B, LED-DCS_A, LED-EQ, LED-SUR, LED-POWER, A8, A9, A1, A2, A3, A4, A5, A6

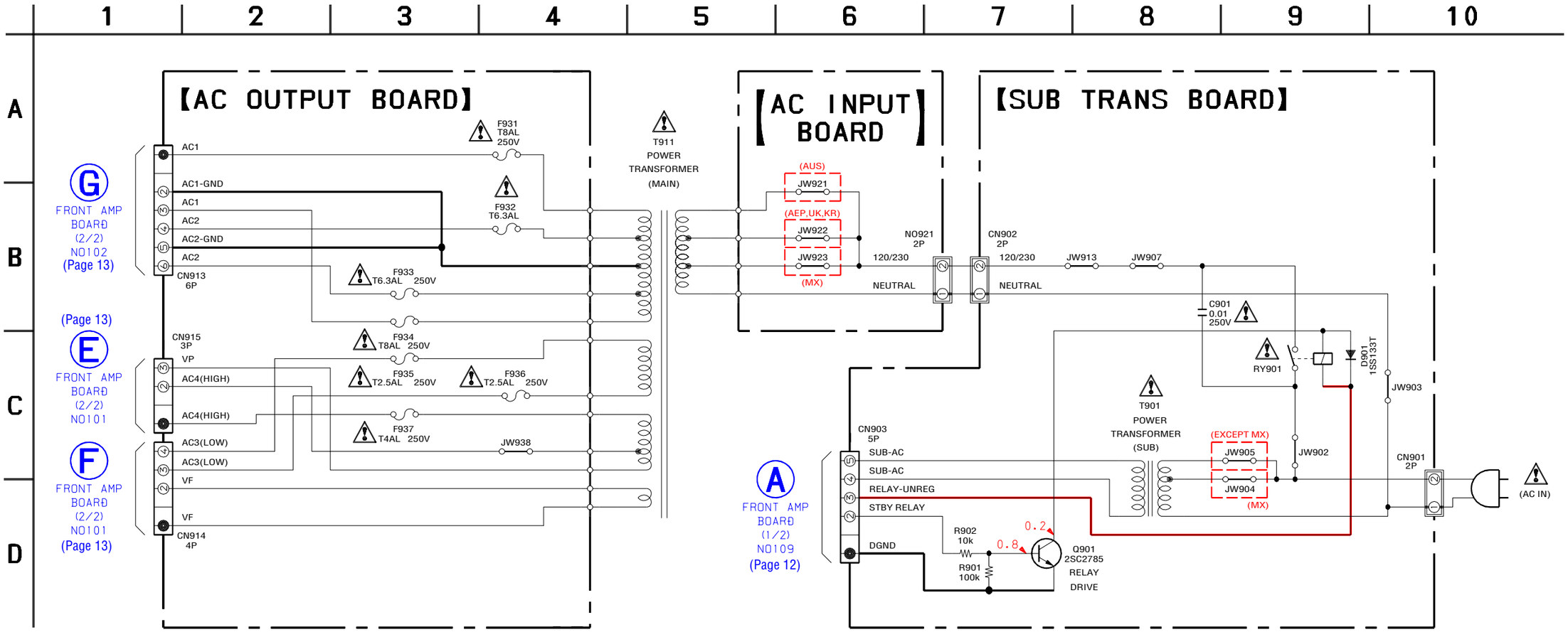
D FRONT AMP BOARD (1/2) CN104 (Page 12)

CLP702
C711 0.01
(CHASSIS)
J703 PHONES
FB706, FB705, FB704
C712 0.001
C710 0.001

5-10. PRINTED WIRING BOARDS – POWER Section – • See page 10 for Circuit Boards Location.



5-11. SCHEMATIC DIAGRAM – POWER Section –



The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

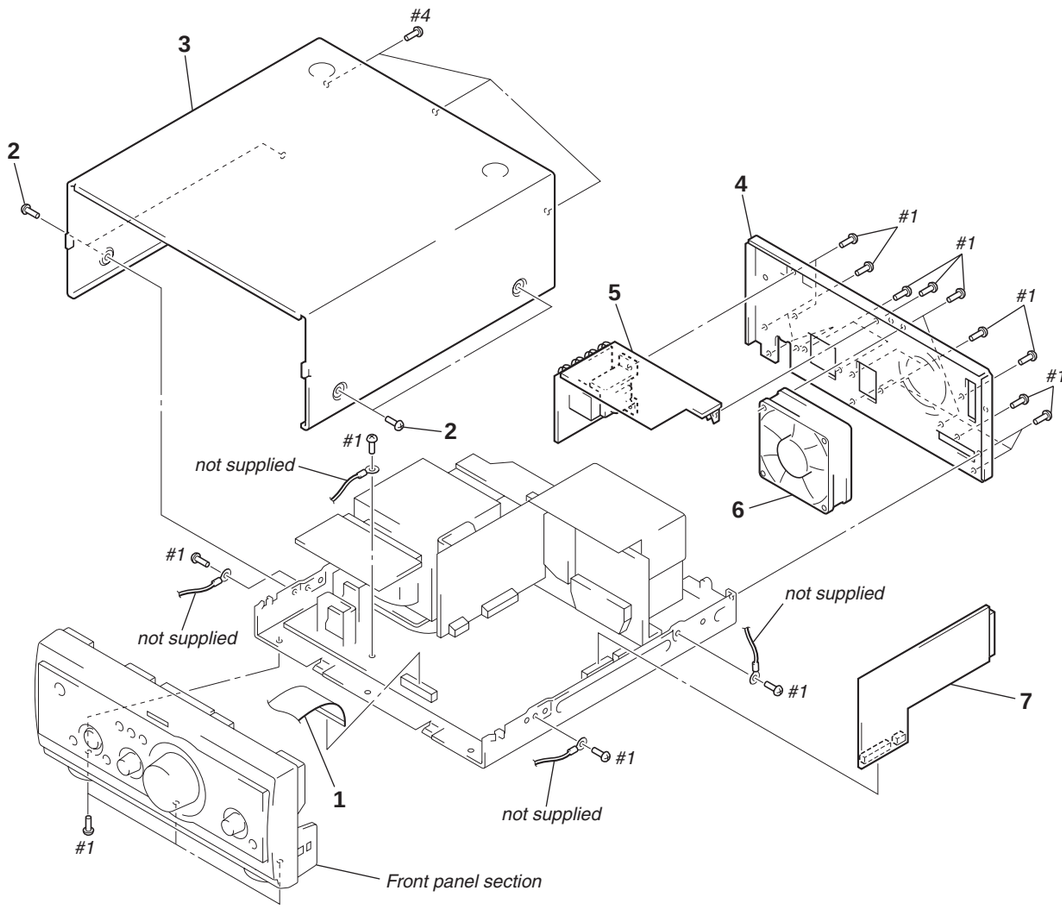
SECTION 6
EXPLODED VIEWS

NOTE:
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts
  Example:
  KNOB, BALANCE (WHITE) . . . (RED)
  ↑ ↑
  Parts Color Cabinet's Color
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list is given in the last of the electrical parts list.

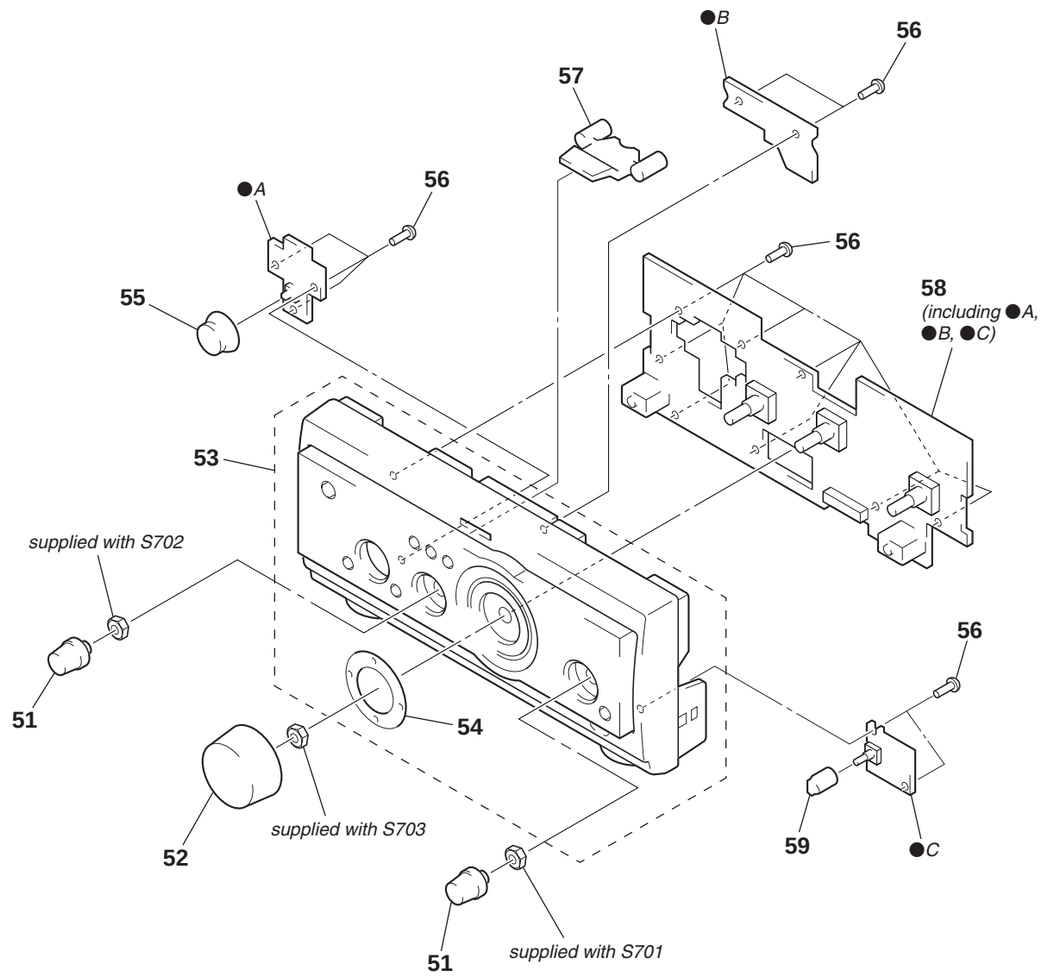
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

- Abbreviation
  AUS : Australian model
  KR : Korean model
  MX : Mexican model

6-1. COVER SECTION

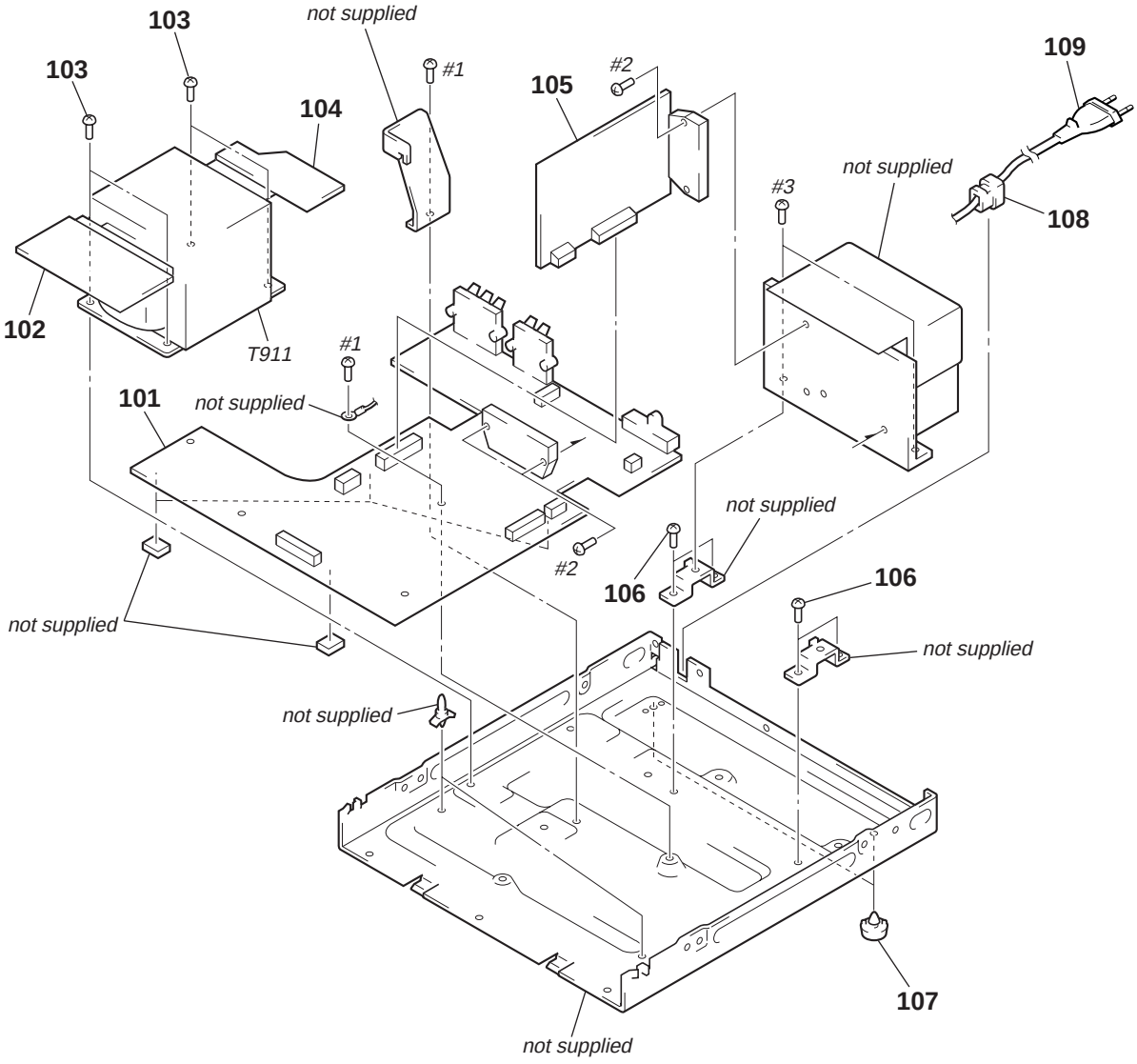


6-2. FRONT PANEL SECTION



Ref. No.	Part No.	Description	Remark
1	1-773-178-11	WIRE (FLAT TYPE) (23 CORE) (AEP, UK)	
1	1-773-210-11	WIRE (FLAT TYPE) (25 CORE) (KR, MX, AUS)	
2	3-363-099-21	SCREW (CASE 3 TP2)	
3	4-232-336-11	COVER	
4	4-232-337-01	PANEL (AV), BACK (AEP)	
4	4-232-337-31	PANEL (AV), BACK (UK)	
4	4-232-337-51	PANEL (AV), BACK (AUS)	
4	4-232-337-71	PANEL (AV), BACK (MX)	
4	4-232-337-81	PANEL (AV), BACK (KR)	
5	1-680-751-11	SUB TRANS BOARD	
6	1-763-072-11	FAN, D. C.	
7	1-680-755-11	RELAY BOARD	
51	4-232-342-01	KNOB (FUNC)	
52	4-232-338-01	KNOB (VOL)	
53	X-4953-453-1	PANEL ASSY, FRONT (AEP, UK)	
53	X-4953-455-1	PANEL ASSY, FRONT (KR, MX, AUS)	
54	4-232-341-01	SHEET (VOL)	
55	4-232-343-01	BUTTON (ENTER)	
56	4-951-620-01	SCREW (2.6X8), +BVTP	
57	4-232-344-01	INDICATOR (BLUE)	
58	A-4476-220-A	PANEL BOARD, COMPLETE (AEP, UK)	
58	A-4476-241-A	PANEL BOARD, COMPLETE (KR, MX, AUS)	
59	4-232-340-01	KNOB (MIC) (KR, MX, AUS)	

6-3. CHASSIS SECTION



The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description	Remark
101	A-2007-899-A	FRONT AMP BOARD, COMPLETE	(KR, MX, AUS)
101	A-4476-214-A	FRONT AMP BOARD, COMPLETE (AEP, UK)	
102	1-680-753-11	AC OUTPUT BOARD	
103	4-900-386-01	SCREW	
104	1-680-752-11	AC INPUT BOARD	
105	A-2007-897-A	SURROUND AMP BOARD, COMPLETE	(KR, MX, AUS)
105	A-4476-217-A	SURROUND AMP BOARD, COMPLETE	(AEP, UK)
106	3-970-608-01	SUMITITE (B3), +BV	
107	4-965-822-01	FOOT	
* 108	3-703-244-00	BUSHING (2104), CORD	
⚠109	1-769-079-21	CORD, POWER (KR)	
⚠109	1-777-071-81	CORD, POWER (AEP)	
⚠109	1-783-203-11	CORD, POWER (AUS)	
⚠109	1-790-226-11	CORD, POWER (UK)	
⚠109	1-791-901-11	CORD, POWER (MX)	
⚠T911	1-435-934-11	TRANSFORMER, POWER (AEP, UK)	
⚠T911	1-435-935-11	TRANSFORMER, POWER (KR, MX, AUS)	

AC INPUT **AC OUTPUT**

FRONT AMP

SECTION 7
ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL: Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F: nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service.
  Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u: μ, for example:
  uA. . : μA. . uPA. . : μPA. .
  uPB. . : μPB. . uPC. . : μPC. .
  uPD. . : μPD. .
- CAPACITORS
  uF: μF
- COILS
  uH: μH

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

When indicating parts by reference number, please include the board.

- Abbreviation
  AUS : Australian model
  KR : Korean model
  MX : Mexican model

Ref. No.	Part No.	Description			Remark
	1-680-752-11	AC INPUT BOARD			
		**********			
**********					
	1-680-753-11	AC OUTPUT BOARD			
		**********			
	1-533-217-41	HOLDER, FUSE			
		< CONNECTOR >			
CN913	1-691-768-11	PLUG (MICRO CONNECTOR) 6P			
CN914	1-691-766-11	PLUG (MICRO CONNECTOR) 4P			
CN915	1-691-765-11	PLUG (MICRO CONNECTOR) 3P			
		< FUSE >			
⚠F931	1-533-949-31	FUSE, CYLINDRICAL (TIME LUG) (T8AL/250V)			
⚠F932	1-533-473-11	FUSE, GLASS TUBE (DIA. 5) (T6.3AL/250V)			
⚠F933	1-533-473-11	FUSE, GLASS TUBE (DIA. 5) (T6.3AL/250V)			
⚠F934	1-533-949-31	FUSE, CYLINDRICAL (TIME LUG) (T8AL/250V)			
⚠F935	1-533-469-11	FUSE, GLASS TUBE (DIA. 5) (T2.5AL/250V)			
⚠F936	1-533-469-11	FUSE, GLASS TUBE (DIA. 5) (T2.5AL/250V)			
⚠F937	1-533-471-11	FUSE, GLASS TUBE (DIA. 5) (T4AL/250V)			
**********					
	A-2007-899-A	FRONT AMP BOARD, COMPLETE			(KR, MX, AUS)
	A-4476-214-A	FRONT AMP BOARD, COMPLETE			(AEP, UK)
		**********			
	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S			
		< CAPACITOR >			
C801	1-126-963-11	ELECT	4.7uF	20%	50V
C802	1-162-286-31	CERAMIC	220PF	10%	50V
C803	1-162-282-31	CERAMIC	100PF	10%	50V
C804	1-104-664-11	ELECT	47uF	20%	10V
C806	1-136-495-11	FILM	0.068uF	5%	50V
C807	1-136-495-11	FILM	0.068uF	5%	50V
C808	1-136-165-00	FILM	0.1uF	5%	50V (AEP, UK)
C809	1-136-165-00	FILM	0.1uF	5%	50V (AEP, UK)
C811	1-162-306-11	CERAMIC	0.01uF	30%	16V
C812	1-162-306-11	CERAMIC	0.01uF	30%	16V

Ref. No.	Part No.	Description			Remark
C821	1-107-721-11	ELECT	4.7uF	20%	100V
C831	1-136-165-00	FILM	0.1uF	5%	50V (AEP, UK)
C832	1-136-165-00	FILM	0.1uF	5%	50V (AEP, UK)
C833	1-136-165-00	FILM	0.1uF	5%	50V (AEP, UK)
C834	1-136-165-00	FILM	0.1uF	5%	50V (AEP, UK)
C835	1-136-165-00	FILM	0.1uF	5%	50V (AEP, UK)
C836	1-136-165-00	FILM	0.1uF	5%	50V (AEP, UK)
C837	1-126-963-11	ELECT	4.7uF	20%	50V
C851	1-126-963-11	ELECT	4.7uF	20%	50V
C852	1-162-286-31	CERAMIC	220PF	10%	50V
C853	1-162-282-31	CERAMIC	100PF	10%	50V
C854	1-104-664-11	ELECT	47uF	20%	10V
C856	1-136-495-11	FILM	0.068uF	5%	50V
C857	1-136-495-11	FILM	0.068uF	5%	50V
C858	1-136-165-00	FILM	0.1uF	5%	50V (AEP, UK)
C859	1-136-165-00	FILM	0.1uF	5%	50V (AEP, UK)
C861	1-162-306-11	CERAMIC	0.01uF	30%	16V
C862	1-162-306-11	CERAMIC	0.01uF	30%	16V
C863	1-162-306-11	CERAMIC	0.01uF	30%	16V
C864	1-162-306-11	CERAMIC	0.01uF	30%	16V
C865	1-162-306-11	CERAMIC	0.01uF	30%	16V
C871	1-107-721-11	ELECT	4.7uF	20%	100V
C872	1-126-959-11	ELECT	0.47uF	20%	50V
C891	1-104-665-11	ELECT	100uF	20%	10V
C892	1-126-961-11	ELECT	2.2uF	20%	50V
C893	1-104-665-11	ELECT	100uF	20%	10V
C911	1-130-777-00	MYLAR	0.1uF	5%	100V
C912	1-130-777-00	MYLAR	0.1uF	5%	100V
C914	1-115-871-11	ELECT	1uF	20%	50V
C915	1-162-282-31	CERAMIC	100PF	10%	50V
C916	1-162-282-31	CERAMIC	100PF	10%	50V
C917	1-162-282-31	CERAMIC	100PF	10%	50V
C918	1-164-159-11	CERAMIC	0.1uF		50V
C919	1-126-964-11	ELECT	10uF	20%	50V
C920	1-164-159-11	CERAMIC	0.1uF		50V
C924	1-162-294-31	CERAMIC	0.001uF	10%	50V
C925	1-126-795-11	ELECT	10uF	20%	50V

FRONT AMP

Ref. No.	Part No.	Description			Remark
C926	1-126-382-11	ELECT	100uF	20%	16V
C927	1-104-665-11	ELECT	100uF	20%	10V
C941	1-164-159-11	CERAMIC	0.1uF		50V
C951	1-135-516-11	ELECT	3300uF	20%	63V
C952	1-135-516-11	ELECT	3300uF	20%	63V
C953	1-135-515-11	ELECT	3300uF	20%	50V
C954	1-135-515-11	ELECT	3300uF	20%	50V
C955	1-136-165-00	FILM	0.1uF	5%	50V
C956	1-136-165-00	FILM	0.1uF	5%	50V
C961	1-128-563-11	ELECT	100uF	20%	100V
C962	1-128-563-11	ELECT	100uF	20%	100V
C963	1-104-665-11	ELECT	100uF	20%	10V
C964	1-119-943-91	ELECT	47uF	20%	50V
C987	1-164-159-11	CERAMIC	0.1uF		50V
C990	1-164-159-11	CERAMIC	0.1uF		50V
C991	1-126-940-11	ELECT	330uF	20%	25V
C992	1-113-342-11	CERAMIC	0.1uF		50V
C993	1-126-935-11	ELECT	470uF	20%	16V
C994	1-126-176-11	ELECT	220uF	20%	10V
C1100	1-164-159-11	CERAMIC	0.1uF		50V
C1101	1-164-159-11	CERAMIC	0.1uF		50V
C1102	1-164-159-11	CERAMIC	0.1uF		50V
C1103	1-164-159-11	CERAMIC	0.1uF		50V
		< CONNECTOR >			
CN103	1-778-981-11	CONNECTOR, BOARD TO BOARD 13P			
CN104	1-784-784-11	CONNECTOR, FFC 23P (AEP, UK)			
CN104	1-784-786-11	CONNECTOR, FFC 25P (KR, MX, AUS)			
CN105	1-564-506-11	PLUG, CONNECTOR 3P			
CN106	1-573-846-11	CONNECTOR, BOARD TO BOARD 14P			
CN107	1-794-498-21	SOCKET, CONNECTOR 20P (SYSTEM CONTROL 1 FROM ST-S5)			
CN108	1-770-721-11	CONNECTOR, BOARD TO BOARD 4P			
CN113	1-770-594-21	CONNECTOR, BOARD TO BOARD 5P			
		< DIODE >			
D801	8-719-911-19	DIODE 1SS133T-72			
D802	8-719-911-19	DIODE 1SS133T-72			
D821	8-719-911-19	DIODE 1SS133T-72			
D831	8-719-911-19	DIODE 1SS133T-72			
D851	8-719-911-19	DIODE 1SS133T-72			
D871	8-719-911-19	DIODE 1SS133T-72			
D881	8-719-911-19	DIODE 1SS133T-72			
D911	8-719-510-68	DIODE D5SBA204101			
D923	8-719-024-99	DIODE 11ES2-NTA2B			
D924	8-719-024-99	DIODE 11ES2-NTA2B			
D925	8-719-911-19	DIODE 1SS133T-72			
D926	8-719-911-19	DIODE 1SS133T-72			
D951	8-719-510-68	DIODE D5SBA204101			
D963	8-719-911-19	DIODE 1SS133T-72			
D970	8-719-024-99	DIODE 11ES2-NTA2B			
D971	8-719-024-99	DIODE 11ES2-NTA2B			
D972	8-719-024-99	DIODE 11ES2-NTA2B			
D973	8-719-024-99	DIODE 11ES2-NTA2B			
D974	8-719-024-99	DIODE 11ES2-NTA2B			
D975	8-719-024-99	DIODE 11ES2-NTA2B			
D980	8-719-024-99	DIODE 11ES2-NTA2B			
D981	8-719-024-99	DIODE 11ES2-NTA2B			

Ref. No.	Part No.	Description			Remark
D990	8-719-024-99	DIODE 11ES2-NTA2B			
D991	8-719-024-99	DIODE 11ES2-NTA2B			
D992	8-719-024-99	DIODE 11ES2-NTA2B			
D993	8-719-024-99	DIODE 11ES2-NTA2B			
D994	8-719-024-99	DIODE 11ES2-NTA2B			
D995	8-719-024-99	DIODE 11ES2-NTA2B			
D996	8-719-024-99	DIODE 11ES2-NTA2B			
D997	8-719-024-99	DIODE 11ES2-NTA2B			
		< GROUND TERMINAL >			
EPT901	1-537-770-21	TERMINAL BOARD, GROUND			
EPT902	1-537-770-21	TERMINAL BOARD, GROUND			
		< IC >			
IC310	6-800-467-01	IC PT8300-S			
IC801	8-749-016-96	IC STK402-120S			
IC923	8-759-595-88	IC NJM78L12A-T3			
IC924	8-759-708-05	IC NJM78L05A-T3			
		< COIL >			
L811	1-420-872-00	COIL, AIR-CORE (AEP, UK)			
L831	1-420-872-00	COIL, AIR-CORE (AEP, UK)			
L832	1-420-872-00	COIL, AIR-CORE (AEP, UK)			
L833	1-420-872-00	COIL, AIR-CORE (AEP, UK)			
L861	1-420-872-00	COIL, AIR-CORE (AEP, UK)			
		< TRANSISTOR >			
Q801	8-729-119-78	TRANSISTOR	2SC2785TP-HFE		
Q821	8-729-231-55	TRANSISTOR	2SC2878AB-TPE2		
Q822	8-729-900-63	TRANSISTOR	BN1F4M-TP		
Q851	8-729-119-78	TRANSISTOR	2SC2785TP-HFE		
Q871	8-729-231-55	TRANSISTOR	2SC2878AB-TPE2		
Q881	8-729-119-76	TRANSISTOR	2SA1175TP-HFE		
Q883	8-729-119-78	TRANSISTOR	2SC2785TP-HFE		
Q891	8-729-119-78	TRANSISTOR	2SC2785TP-HFE		
Q892	8-729-119-78	TRANSISTOR	2SC2785TP-HFE		
Q893	8-729-119-76	TRANSISTOR	2SA1175TP-HFE		
Q894	8-729-119-78	TRANSISTOR	2SC2785TP-HFE		
Q895	8-729-119-78	TRANSISTOR	2SC2785TP-HFE		
Q896	8-729-119-78	TRANSISTOR	2SC2785TP-HFE		
Q897	8-729-119-78	TRANSISTOR	2SC2785TP-HFE		
Q902	8-729-119-78	TRANSISTOR	2SC2785TP-HFE		
Q903	8-729-140-04	TRANSISTOR	2SB1116-TP-LK		
Q904	8-729-142-46	TRANSISTOR	2SC2001TP-LK		
Q961	8-729-140-84	TRANSISTOR	2SC1841TP-PAFAEA		
Q962	8-729-140-82	TRANSISTOR	2SA988TP-PAFAEA		
Q963	8-729-140-84	TRANSISTOR	2SC1841TP-PAFAEA		
		< RESISTOR >			
R801	1-249-417-11	CARBON	1K	5%	1/4W
R802	1-249-438-11	CARBON	56K	5%	1/4W
R803	1-249-410-11	CARBON	270	5%	1/4W
R804	1-249-438-11	CARBON	56K	5%	1/4W
⚠R805	1-234-499-21	ENCAPSULATED COMPONENT	0.22		5W
R806	1-249-417-11	CARBON	1K	5%	1/4W
R807	1-249-431-11	CARBON	15K	5%	1/4W
R808	1-249-441-11	CARBON	100K	5%	1/4W
R809	1-260-076-11	CARBON	10	5%	1/2W

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

FRONT AMP PANEL

Ref. No.	Part No.	Description			Remark
R811	1-260-076-11	CARBON	10	5%	1/2W (AEP, UK)
R812	1-260-076-11	CARBON	10	5%	1/2W (AEP, UK)
R814	1-249-437-11	CARBON	47K	5%	1/4W
R815	1-249-437-11	CARBON	47K	5%	1/4W
⚠R821	1-216-455-51	METAL OXIDE	560	5%	2W F
R825	1-249-402-11	CARBON	56	5%	1/4W
R826	1-249-417-11	CARBON	1K	5%	1/4W
R827	1-249-433-11	CARBON	22K	5%	1/4W
R831	1-260-076-11	CARBON	10	5%	1/2W (AEP, UK)
R832	1-260-076-11	CARBON	10	5%	1/2W (AEP, UK)
R833	1-260-076-11	CARBON	10	5%	1/2W (AEP, UK)
R834	1-260-076-11	CARBON	10	5%	1/2W (AEP, UK)
R835	1-260-076-11	CARBON	10	5%	1/2W (AEP, UK)
R836	1-260-076-11	CARBON	10	5%	1/2W (AEP, UK)
R837	1-249-437-11	CARBON	47K	5%	1/4W
R838	1-249-437-11	CARBON	47K	5%	1/4W
R839	1-249-437-11	CARBON	47K	5%	1/4W
R851	1-249-417-11	CARBON	1K	5%	1/4W
R852	1-249-438-11	CARBON	56K	5%	1/4W
R853	1-249-410-11	CARBON	270	5%	1/4W
R854	1-249-438-11	CARBON	56K	5%	1/4W
⚠R855	1-234-499-21	ENCAPSULATED COMPONENT 0.22			5W
R856	1-249-417-11	CARBON	1K	5%	1/4W
R857	1-249-431-11	CARBON	15K	5%	1/4W
R858	1-249-441-11	CARBON	100K	5%	1/4W
R859	1-260-076-11	CARBON	10	5%	1/2W
R861	1-260-076-11	CARBON	10	5%	1/2W (AEP, UK)
R862	1-260-076-11	CARBON	10	5%	1/2W (AEP, UK)
⚠R871	1-216-455-51	METAL OXIDE	560	5%	2W F
R875	1-249-402-11	CARBON	56	5%	1/4W
R876	1-249-417-11	CARBON	1K	5%	1/4W
R877	1-249-433-11	CARBON	22K	5%	1/4W
R878	1-249-425-11	CARBON	4.7K	5%	1/4W
R879	1-249-441-11	CARBON	100K	5%	1/4W
R880	1-247-903-00	CARBON	1M	5%	1/4W
⚠R881	1-215-888-00	METAL OXIDE	220	5%	2W F
R883	1-249-437-11	CARBON	47K	5%	1/4W
R885	1-249-429-11	CARBON	10K	5%	1/4W
R887	1-249-441-11	CARBON	100K	5%	1/4W
R889	1-249-429-11	CARBON	10K	5%	1/4W
R891	1-249-438-11	CARBON	56K	5%	1/4W
R892	1-249-439-11	CARBON	68K	5%	1/4W
R894	1-249-429-11	CARBON	10K	5%	1/4W
R895	1-249-429-11	CARBON	10K	5%	1/4W
R896	1-249-435-11	CARBON	33K	5%	1/4W
R897	1-249-433-11	CARBON	22K	5%	1/4W
R898	1-249-425-11	CARBON	4.7K	5%	1/4W
R903	1-249-429-11	CARBON	10K	5%	1/4W
R904	1-249-441-11	CARBON	100K	5%	1/4W
R905	1-249-421-11	CARBON	2.2K	5%	1/4W
R906	1-249-417-11	CARBON	1K	5%	1/4W
R907	1-249-421-11	CARBON	2.2K	5%	1/4W
R908	1-249-421-11	CARBON	2.2K	5%	1/4W
R910	1-247-807-31	CARBON	100	5%	1/4W
R911	1-247-807-31	CARBON	100	5%	1/4W
R912	1-247-807-31	CARBON	100	5%	1/4W
R913	1-249-437-11	CARBON	47K	5%	1/4W
R914	1-247-807-31	CARBON	100	5%	1/4W
R915	1-249-437-11	CARBON	47K	5%	1/4W
R916	1-247-807-31	CARBON	100	5%	1/4W
R917	1-249-411-11	CARBON	330	5%	1/4W
R918	1-249-411-11	CARBON	330	5%	1/4W
R919	1-249-411-11	CARBON	330	5%	1/4W
R920	1-249-411-11	CARBON	330	5%	1/4W
R921	1-249-411-11	CARBON	330	5%	1/4W
R923	1-249-417-11	CARBON	1K	5%	1/4W
R924	1-249-437-11	CARBON	47K	5%	1/4W
R925	1-249-437-11	CARBON	47K	5%	1/4W
R926	1-249-429-11	CARBON	10K	5%	1/4W
R927	1-249-437-11	CARBON	47K	5%	1/4W
R951	1-249-441-11	CARBON	100K	5%	1/4W
R952	1-249-441-11	CARBON	100K	5%	1/4W
R953	1-249-441-11	CARBON	100K	5%	1/4W
R954	1-249-441-11	CARBON	100K	5%	1/4W
⚠R963	1-212-881-11	FUSIBLE	100	5%	1/4W F
⚠R964	1-212-881-11	FUSIBLE	100	5%	1/4W F
R965	1-249-431-11	CARBON	15K	5%	1/4W
R966	1-249-435-11	CARBON	33K	5%	1/4W
R967	1-249-429-11	CARBON	10K	5%	1/4W
⚠R968	1-202-972-61	FUSIBLE	1	5%	1/4W F
R969	1-249-433-11	CARBON	22K	5%	1/4W
R970	1-249-441-11	CARBON	100K	5%	1/4W
R971	1-249-421-11	CARBON	2.2K	5%	1/4W
R972	1-249-433-11	CARBON	22K	5%	1/4W
R973	1-249-421-11	CARBON	2.2K	5%	1/4W
R974	1-249-429-11	CARBON	10K	5%	1/4W
R991	1-249-417-11	CARBON	1K	5%	1/4W
R992	1-249-417-11	CARBON	1K	5%	1/4W

< RELAY >

RY881	1-515-920-11	RELAY

< TERMINAL >

TM101	1-694-677-12	TERMINAL BOARD (4P) (FRONT SPEAKER IMPEDANCE USE 6-16Ω)
TM102	1-694-674-12	TERMINAL BOARD (6P) (REAR/CENTER SPEAKER IMPEDANCE USE 8-16Ω)

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	A-4476-220-A	PANEL BOARD, COMPLETE (AEP, UK)
	A-4476-241-A	PANEL BOARD, COMPLETE (KR, MX, AUS)

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< CAPACITOR >

C701	1-162-306-11	CERAMIC	0.01uF	30%	16V
C702	1-162-306-11	CERAMIC	0.01uF	30%	16V
C703	1-162-306-11	CERAMIC	0.01uF	30%	16V

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

PANEL

Ref. No.	Part No.	Description			Remark
C704	1-162-306-11	CERAMIC	0.01uF	30%	16V
C705	1-162-306-11	CERAMIC	0.01uF	30%	16V
C706	1-162-306-11	CERAMIC	0.01uF	30%	16V
C710	1-162-294-31	CERAMIC	0.001uF	10%	50V
C711	1-162-306-11	CERAMIC	0.01uF	30%	16V
C712	1-162-294-31	CERAMIC	0.001uF	10%	50V
C723	1-162-306-11	CERAMIC	0.01uF	30%	16V (KR, MX, AUS)
C724	1-115-868-11	ELECT	0.22uF	20%	50V (KR, MX, AUS)
C725	1-162-294-31	CERAMIC	0.001uF	10%	50V (KR, MX, AUS)
C726	1-162-215-31	CERAMIC	47PF	5%	50V (KR, MX, AUS)
C727	1-162-290-31	CERAMIC	470PF	10%	50V (KR, MX, AUS)
C728	1-115-867-11	ELECT	0.1uF	20%	50V (KR, MX, AUS)
C729	1-115-872-11	ELECT	2.2uF	20%	50V (KR, MX, AUS)
C730	1-162-287-31	CERAMIC	270PF	10%	50V (KR, MX, AUS)
C731	1-115-872-11	ELECT	2.2uF	20%	50V (KR, MX, AUS)
C732	1-126-382-11	ELECT	100uF	20%	10V (KR, MX, AUS)
C733	1-126-791-11	ELECT	10uF	20%	16V (KR, MX, AUS)
C734	1-162-215-31	CERAMIC	47PF	5%	50V (KR, MX, AUS)
C735	1-126-791-11	ELECT	10uF	20%	16V (KR, MX, AUS)
C751	1-162-306-11	CERAMIC	0.01uF	30%	16V (KR, MX, AUS)
C752	1-126-791-11	ELECT	10uF	20%	16V (KR, MX, AUS)
C781	1-162-306-11	CERAMIC	0.01uF	30%	16V
		< CONNECTOR >			
CN700	1-784-745-11	CONNECTOR, FFC 23P (AEP, UK)			
CN700	1-784-747-11	CONNECTOR, FFC 25P (KR, MX, AUS)			
		< LED >			
D701	8-719-058-04	LED SEL5223S-TP15 (I/⏻)			
D702	8-719-057-97	LED SEL5923A-TP15 (SUR)			
D703	8-719-057-97	LED SEL5923A-TP15 (EQ)			
D704	8-719-057-97	LED SEL5923A-TP15 (CINEMA STUDIO A)			
D705	8-719-057-97	LED SEL5923A-TP15 (CINEMA STUDIO B)			
D706	8-719-057-97	LED SEL5923A-TP15 (CINEMA STUDIO C)			
D781	8-719-084-07	LED SEL5E20CTP15 (MULTI CHANNEL DECODING)			
		< COIL >			
FB707	1-412-473-21	INDUCTOR	0uH (KR, MX, AUS)		
		< IC >			
IC702	8-759-167-88	IC NJM4565D (KR, MX, AUS)			

Ref. No.	Part No.	Description			Remark
		< JACK >			
J702	1-691-293-21	JACK (MIC) (KR, MX, AUS)			
J703	1-691-293-21	JACK (PHONES)			
		< TRANSISTOR >			
Q701	8-729-900-80	TRANSISTOR	BA1A4M-TP		
Q702	8-729-900-63	TRANSISTOR	BN1F4M-TP		
Q710	8-729-119-78	TRANSISTOR	2SC2785TP-HFE		(KR, MX, AUS)
		< RESISTOR >			
R707	1-249-411-11	CARBON	330	5%	1/4W
R708	1-247-807-31	CARBON	100	5%	1/4W
R709	1-249-410-11	CARBON	270	5%	1/4W
R710	1-249-413-11	CARBON	470	5%	1/4W
R711	1-249-414-11	CARBON	560	5%	1/4W
R712	1-249-416-11	CARBON	820	5%	1/4W
R713	1-249-417-11	CARBON	1K	5%	1/4W
R714	1-249-418-11	CARBON	1.2K	5%	1/4W
R715	1-249-419-11	CARBON	1.5K	5%	1/4W
R716	1-249-421-11	CARBON	2.2K	5%	1/4W
R717	1-249-422-11	CARBON	2.7K	5%	1/4W
R718	1-249-424-11	CARBON	3.9K	5%	1/4W
R719	1-249-426-11	CARBON	5.6K	5%	1/4W
R720	1-249-428-11	CARBON	8.2K	5%	1/4W
R721	1-249-431-11	CARBON	15K	5%	1/4W
R728	1-249-429-11	CARBON	10K	5%	1/4W (KR, MX, AUS)
R729	1-249-417-11	CARBON	1K	5%	1/4W (KR, MX, AUS)
R730	1-249-441-11	CARBON	100K	5%	1/4W (KR, MX, AUS)
R731	1-249-417-11	CARBON	1K	5%	1/4W (KR, MX, AUS)
R732	1-249-433-11	CARBON	22K	5%	1/4W (KR, MX, AUS)
R733	1-247-807-31	CARBON	100	5%	1/4W (KR, MX, AUS)
R734	1-249-429-11	CARBON	10K	5%	1/4W (KR, MX, AUS)
R735	1-247-883-00	CARBON	150K	5%	1/4W (KR, MX, AUS)
R736	1-247-807-31	CARBON	100	5%	1/4W (KR, MX, AUS)
R737	1-249-417-11	CARBON	1K	5%	1/4W (KR, MX, AUS)
R738	1-249-429-11	CARBON	10K	5%	1/4W (KR, MX, AUS)
R739	1-249-429-11	CARBON	10K	5%	1/4W (KR, MX, AUS)
R740	1-249-441-11	CARBON	100K	5%	1/4W (KR, MX, AUS)
		< VARIABLE RESISTOR >			
RV761	1-225-739-11	RES, VAR CARBON 50K (MIC LEVEL)			(KR, MX, AUS)
		< SWITCH >			
S701	1-473-534-11	ENCODER, ROTARY (FUNCTION)			

PANEL | RELAY | SUB TRANS | SURROUND AMP

Ref. No.	Part No.	Description	Remark
S702	1-473-534-11	ENCODER, ROTARY (FILE SELECT)	
S703	1-473-392-11	ENCODER, ROTARY (VOLUME)	
S705	1-771-410-21	SWITCH, TACTILE (I/⏻)	
S710	1-771-410-21	SWITCH, TACTILE (SUR)	
S711	1-771-410-21	SWITCH, TACTILE (EQ)	
S712	1-771-410-21	SWITCH, TACTILE (CINEMA STUDIO A)	
S713	1-771-410-21	SWITCH, TACTILE (CINEMA STUDIO B)	
S714	1-771-410-21	SWITCH, TACTILE (CINEMA STUDIO C)	
S715	1-771-410-21	SWITCH, TACTILE (DIGITAL)	
S718	1-771-410-21	SWITCH, TACTILE (SET UP)	
S719	1-771-410-21	SWITCH, TACTILE (EQ ON/OFF)	
S723	1-771-879-11	SWITCH, TACTILE (ENTER)	
**********			
	1-680-755-11	RELAY BOARD	
		**********	
		< CONNECTOR >	
CN110	1-793-351-41	SOCKET, CONNECTOR 19P	
* CN111	1-573-828-11	CONNECTOR, BOARD TO BOARD 14P	
CN112	1-770-593-41	CONNECTOR, BOARD TO BOARD 5P	
**********			
	1-680-751-11	SUB TRANS BOARD	
		**********	
		< CAPACITOR >	
⚠C901	1-113-925-11	CERAMIC 0.01uF 20%	250V
		< CONNECTOR >	
CN901	1-564-321-00	PIN, CONNECTOR 2P	
* CN902	1-564-321-21	PIN, CONNECTOR 2P	
CN903	1-691-767-11	PLUG (MICRO CONNECTOR) 5P	
		< DIODE >	
D901	8-719-911-19	DIODE 1SS133T-72	
		< TRANSISTOR >	
Q901	8-729-119-78	TRANSISTOR 2SC2785TP-HFE	
		< RESISTOR >	
R901	1-249-441-11	CARBON 100K 5%	1/4W
R902	1-249-429-11	CARBON 10K 5%	1/4W
		< RELAY >	
⚠RY901	1-755-276-11	RELAY, POWER	
		< TRANSFORMER >	
⚠T901	1-435-824-11	TRANSFORMER, POWER (AEP, UK)	
⚠T901	1-435-825-11	TRANSFORMER, POWER (KR, MX, AUS)	
**********			

Ref. No.	Part No.	Description	Remark
	A-2007-897-A	SURROUND AMP BOARD, COMPLETE	(KR, MX, AUS)
	A-4476-217-A	SURROUND AMP BOARD, COMPLETE	(AEP, UK)
		**********	
		< CAPACITOR >	
C1001	1-126-964-11	ELECT 10uF 20%	50V
C1002	1-162-286-31	CERAMIC 220PF 10%	50V
C1003	1-162-282-31	CERAMIC 100PF 10%	50V
C1004	1-104-664-11	ELECT 47uF 20%	10V
C1006	1-136-495-11	FILM 0.068uF 5%	50V
C1007	1-136-495-11	FILM 0.068uF 5%	50V
C1033	1-126-968-11	ELECT 100uF 20%	50V
C1034	1-126-968-11	ELECT 100uF 20%	50V
C1038	1-162-306-11	CERAMIC 0.01uF 20%	16V
C1039	1-162-306-11	CERAMIC 0.01uF 20%	16V
C1051	1-126-964-11	ELECT 10uF 20%	50V
C1052	1-162-286-31	CERAMIC 220PF 10%	50V
C1053	1-162-282-31	CERAMIC 100PF 10%	50V
C1054	1-104-664-11	ELECT 47uF 20%	10V
C1056	1-136-495-11	FILM 0.068uF 5%	50V
C1057	1-136-495-11	FILM 0.068uF 5%	50V
C1081	1-126-964-11	ELECT 10uF 20%	50V
C1082	1-162-286-31	CERAMIC 220PF 10%	50V
C1083	1-162-282-31	CERAMIC 100PF 10%	50V
C1084	1-104-664-11	ELECT 47uF 20%	10V
C1086	1-136-495-11	FILM 0.068uF 5%	50V
C1087	1-136-495-11	FILM 0.068uF 5%	50V
		< CONNECTOR >	
CN1002	1-778-982-11	CONNECTOR, BOARD TO BOARD 13P	
CN1003	1-770-725-11	CONNECTOR, BOARD TO BOARD 4P	
		< DIODE >	
D1001	8-719-911-19	DIODE 1SS133T-72	
D1002	8-719-911-19	DIODE 1SS133T-72	
D1051	8-719-911-19	DIODE 1SS133T-72	
D1061	8-719-911-19	DIODE 1SS133T-72	
D1062	8-719-911-19	DIODE 1SS133T-72	
D1081	8-719-911-19	DIODE 1SS133T-72	
		< IC >	
IC1001	8-749-017-17	IC STK443-050	
		< TRANSISTOR >	
Q1001	8-729-119-78	TRANSISTOR 2SC2785TP-HFE	
Q1051	8-729-119-78	TRANSISTOR 2SC2785TP-HFE	
Q1061	8-729-119-76	TRANSISTOR 2SA1175TP-HFE	
Q1063	8-729-900-36	TRANSISTOR BA1F4M-TP	
Q1081	8-729-119-78	TRANSISTOR 2SC2785TP-HFE	
Q1092	8-729-119-78	TRANSISTOR 2SC2785TP-HFE	
Q1093	8-729-119-78	TRANSISTOR 2SC2785TP-HFE	
		< RESISTOR >	
R1001	1-249-417-11	CARBON 1K 5%	1/4W
R1002	1-249-438-11	CARBON 56K 5%	1/4W

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

SURROUND AMP

Ref. No.	Part No.	Description			Remark
R1003	1-249-415-11	CARBON	680	5%	1/4W
R1004	1-249-438-11	CARBON	56K	5%	1/4W
⚠R1005	1-233-352-41	ENCAPSULATED COMPONENT	0.22		2W
R1006	1-249-417-11	CARBON	1K	5%	1/4W
R1007	1-249-431-11	CARBON	15K	5%	1/4W
R1008	1-249-441-11	CARBON	100K	5%	1/4W
R1009	1-260-076-11	CARBON	10	5%	1/2W
R1010	1-249-437-11	CARBON	47K	5%	1/4W
⚠R1031	1-212-881-11	FUSIBLE	100	5%	1/4W F
⚠R1032	1-212-881-11	FUSIBLE	100	5%	1/4W F
⚠R1033	1-202-972-61	FUSIBLE	1	5%	1/4W F
R1047	1-249-429-11	CARBON	10K	5%	1/4W
R1051	1-249-417-11	CARBON	1K	5%	1/4W
R1052	1-249-438-11	CARBON	56K	5%	1/4W
R1053	1-249-415-11	CARBON	680	5%	1/4W
R1054	1-249-438-11	CARBON	56K	5%	1/4W
⚠R1055	1-233-352-41	ENCAPSULATED COMPONENT	0.22		2W
R1056	1-249-417-11	CARBON	1K	5%	1/4W
R1057	1-249-431-11	CARBON	15K	5%	1/4W
R1058	1-249-441-11	CARBON	100K	5%	1/4W
R1059	1-260-076-11	CARBON	10	5%	1/2W
R1060	1-249-438-11	CARBON	56K	5%	1/4W
⚠R1061	1-215-888-00	METAL OXIDE	220	5%	2W F
⚠R1062	1-215-888-00	METAL OXIDE	220	5%	2W F
R1063	1-249-429-11	CARBON	10K	5%	1/4W
R1065	1-249-433-11	CARBON	22K	5%	1/4W
R1081	1-249-417-11	CARBON	1K	5%	1/4W
R1082	1-249-438-11	CARBON	56K	5%	1/4W
R1083	1-247-834-11	CARBON	1.3K	5%	1/4W
R1084	1-249-438-11	CARBON	56K	5%	1/4W
⚠R1085	1-233-352-41	ENCAPSULATED COMPONENT	0.22		2W
R1086	1-249-417-11	CARBON	1K	5%	1/4W
R1087	1-249-431-11	CARBON	15K	5%	1/4W
R1088	1-249-441-11	CARBON	100K	5%	1/4W
R1089	1-260-076-11	CARBON	10	5%	1/2W
R1090	1-249-439-11	CARBON	68K	5%	1/4W
R1092	1-249-441-11	CARBON	100K	5%	1/4W
R1093	1-249-441-11	CARBON	100K	5%	1/4W
R1094	1-249-439-11	CARBON	68K	5%	1/4W
R1095	1-249-433-11	CARBON	22K	5%	1/4W

< RELAY >

RY1061	1-515-920-11	RELAY (24V)
RY1062	1-515-920-11	RELAY (24V)

< THERMISTOR (POSITIVE) >

THP092	1-807-796-11	THERMISTOR

****

Ref. No.	Part No.	Description	Remark
		MISCELLANEOUS	
		**********	
1	1-773-178-11	WIRE (FLAT TYPE) (23 CORE) (AEP, UK)	
1	1-773-210-11	WIRE (FLAT TYPE) (25 CORE) (KR, MX, AUS)	
6	1-763-072-11	FAN, D. C.	
⚠109	1-769-079-21	CORD, POWER (KR)	
⚠109	1-777-071-81	CORD, POWER (AEP)	
⚠109	1-783-203-11	CORD, POWER (AUS)	
⚠109	1-790-226-11	CORD, POWER (UK)	
⚠109	1-791-901-11	CORD, POWER (MX)	
⚠T911	1-435-934-11	TRANSFORMER, POWER (AEP, UK)	
⚠T911	1-435-935-11	TRANSFORMER, POWER (KR, MX, AUS)	

****

		**********	
		HARDWARE LIST	
		**********	
#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	
#2	7-685-650-79	SCREW +BVTP 3X16 TYPE2 IT-3	
#3	7-685-872-09	SCREW +BVTT 3X8 (S)	
#4	7-685-871-01	SCERW +BVTT 3X6 (S)	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

REVISION HISTORY

Clicking the version allows you to jump to the revised page.
Also, clicking the version at the upper right on the revised page allows you to jump to the next revised page.

Ver.	Date	Description of Revision
1.0	2001.04	New

SS-CT270/RC270/RS270

SERVICE MANUAL

Ver.1.0 2001.03

Photo: SS-RS270

Photo: SS-CT270

SS-RC270 is packaged name
(SS-RS270 and SS-CT270).

US Model
Canadian Model
AEP Model
UK Model
E Model
Australian Model
Tourist Model

SPECIFICATION

SS-RS270

Speaker system	1-way, 1-unit, bass-reflex type
Speaker units	
Full-range	8 cm, cone type
Nominal impedance	8 ohms
Dimensions (w/h/d)	Approx. 180 x 95 x 100 mm
Mass	Approx. 0.65 kg net per speaker

SS-CT270

Speaker system	1-way, 2-unit, bass-reflex type magnetically shielded type
Speaker units	
Full-range	8 cm, cone type
Nominal impedance	8 ohms
Dimensions (w/h/d)	Approx. 225 x 95 x 100 mm
Mass	Approx. 1.2 kg net

Design and specifications are subject to change without notice.

SPEAKER SYSTEM

9-873-860-11
2001C0900-1
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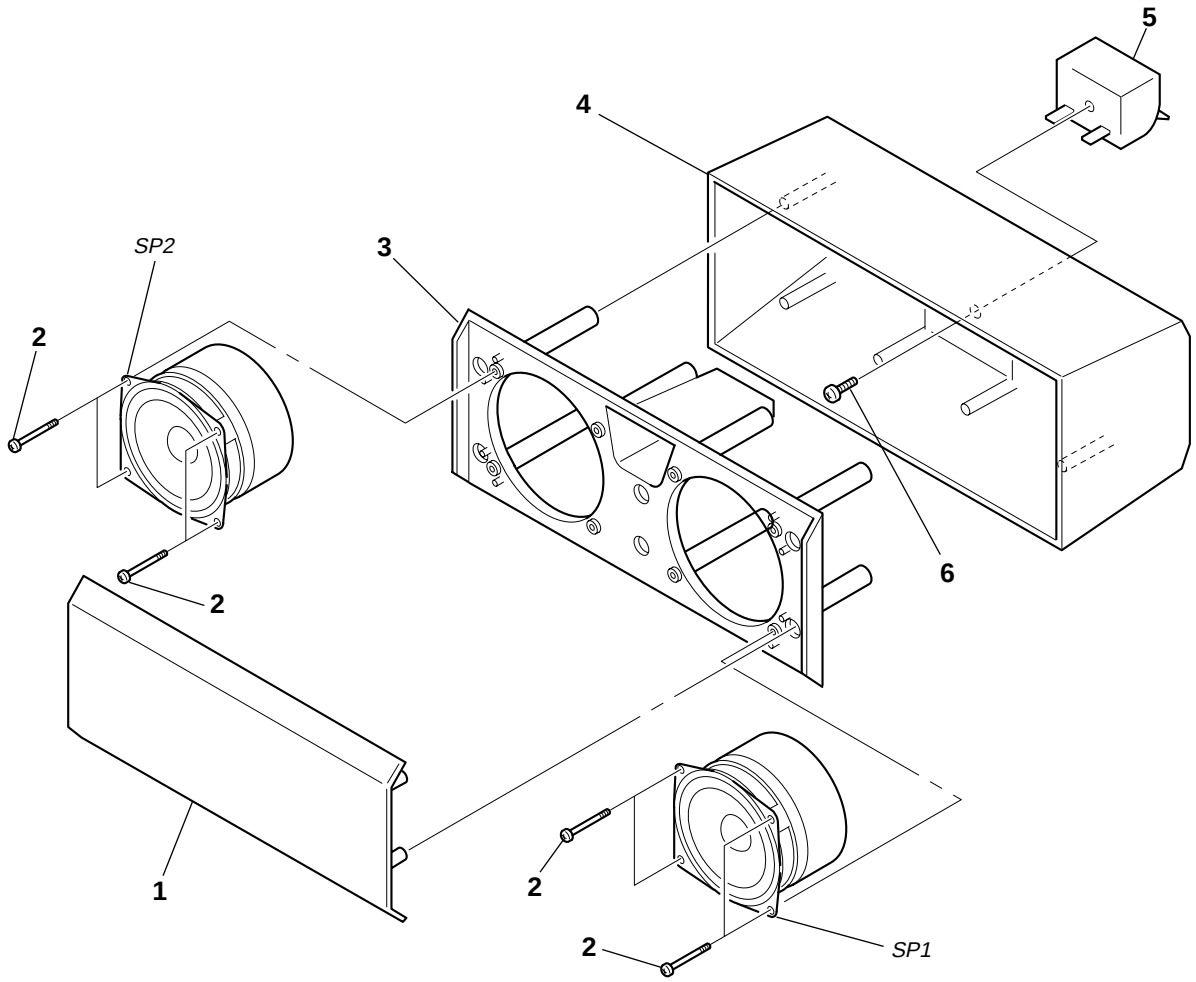
Sony Corporation
Audio Entertainment Group
General Engineering Dept.

SONY®

EXPLODED VIEW AND PARTS LIST

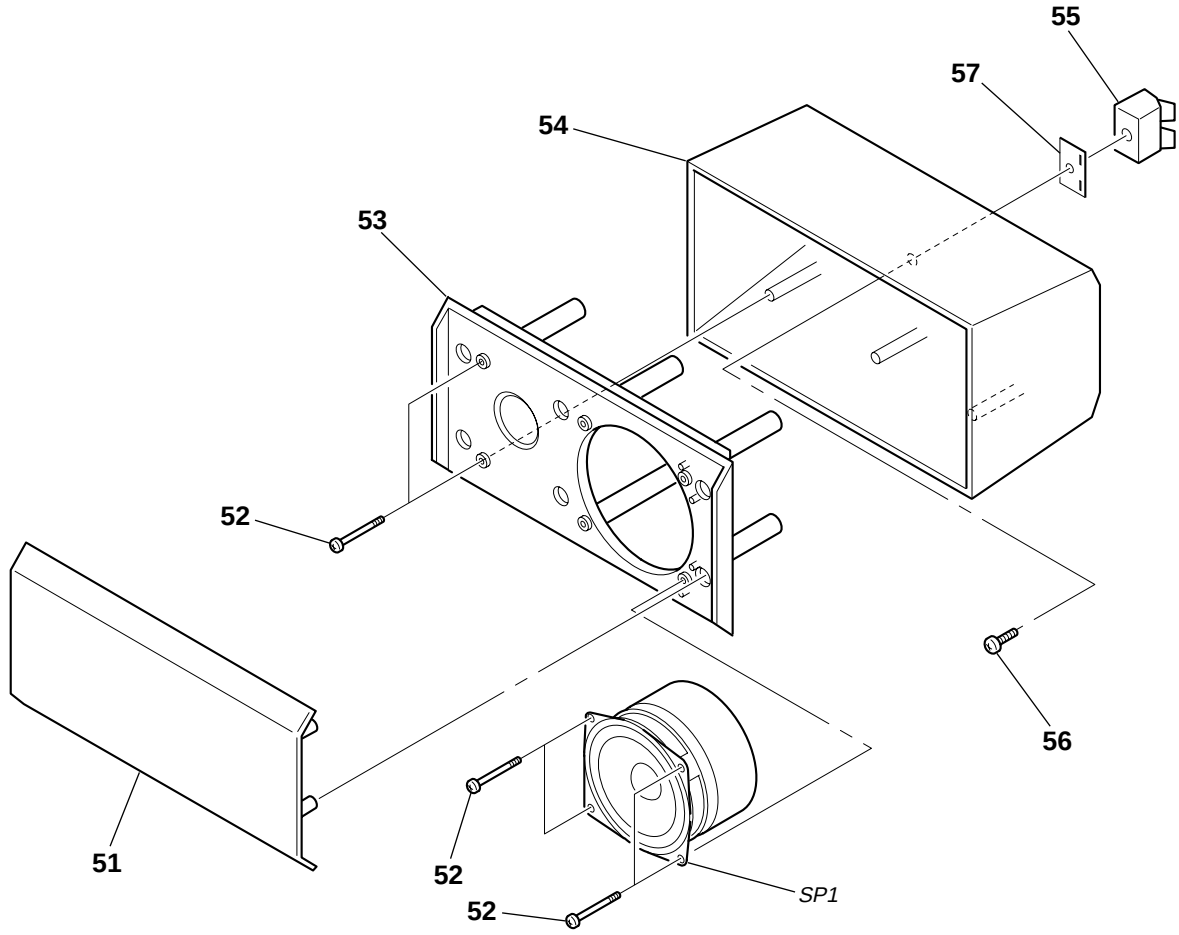
NOTE:
- The mechanical parts with no reference number in the exploded views are not supplied.

• SS-CT270



Ref. No.	Part No.	Description	Remark
1	X-4953-893-1	FRAME ASSY, GRILLE	
2	4-978-600-01	SCREW	
3	4-221-063-11	PANEL, FRONT	
4	X-4953-852-1	CABINET ASSY	
5	1-537-775-12	TERMINAL BOARD	
6	7-685-661-29	SCREW +BVTP 4 X 12 TYPE2 SLIT	
SP1	1-529-983-11	SPEAKER (8CM)	
SP2	1-529-983-11	SPEAKER (8CM)	

• **SS-RS270**



Ref. No.	Part No.	Description	Remark
51	X-4953-892-1	FRAME ASSY, GRILLE	
52	4-978-600-01	SCREW	
53	4-232-595-01	PANEL, FRONT	
54	X-4953-876-1	CABINET ASSY	
55	1-694-516-11	TERMINAL, SPEAKER	
56	4-874-614-01	SCREW (4) (3.5 X 14), TAPPING	
57	4-229-803-11	PACKING	
SP1	1-529-982-11	SPEAKER (8CM)	

REVISION HISTORY

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Ver.	Date	Description of Revision
1.0	2001.03	New

ST-S5

SERVICE MANUAL

Ver 1.0 2001.04

AEP Model
UK Model
E Model
Australian Model

ST-S5 is the tuner section in MHC-S7AV.

SPECIFICATIONS

Tuner section

FM stereo, FM/AM superheterodyne tuner

FM tuner section

Tuning range	87.5 – 108.0 MHz
Antenna	FM lead antenna
Antenna terminals	75 ohm unbalanced
Intermediate frequency	10.7 MHz

AM tuner section

Tuning range	
AEP, UK models:	531 – 1,602 kHz (with the interval set at 9 kHz)
Other models:	531 – 1,602 kHz (with the interval set at 9 kHz) 530 – 1,710 kHz (with the interval set at 10 kHz)
Antenna	AM loop antenna
Antenna terminals	External antenna terminal
Intermediate frequency	450 kHz
Dimensions (w/h/d)	Approx. 280 x 108 x 340 mm
Mass	Approx. 2.1 kg

Design and specifications are subject to change without notice.

FM STEREO/FM-AM SUPERHETERODYNE TUNER

9-873-832-11
2001D0500-1
© 2001.4

Sony Corporation
Home Audio Company
Shinagawa Tec Service Manual Production Group

SONY®

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Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

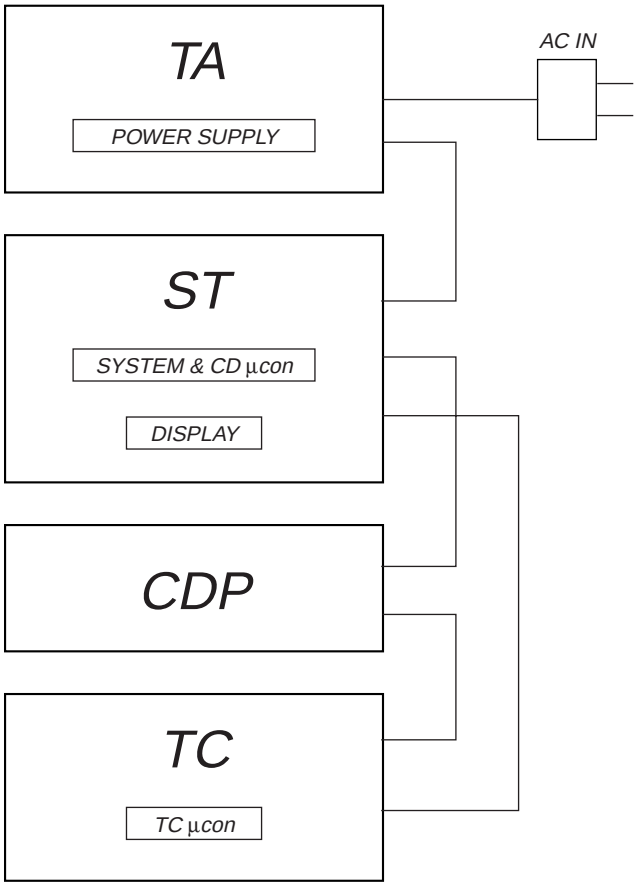
SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

SECTION 1
SERVICING NOTES

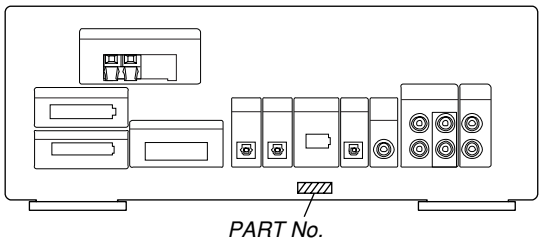
This set is a component of the MHC-S7AV.
The MHC-S7AV system configuration is as shown below, and therefore it does not operate normally unless all four components are connected.
In performing the repair, connect all components with the system cables.
Note: The precaution to the users is described on the label stuck on the back panel (CD player) and in the troubleshooting section in the Operation Manual.

System Configuration:



- **MODEL IDENTIFICATION**

– Rear Panel –



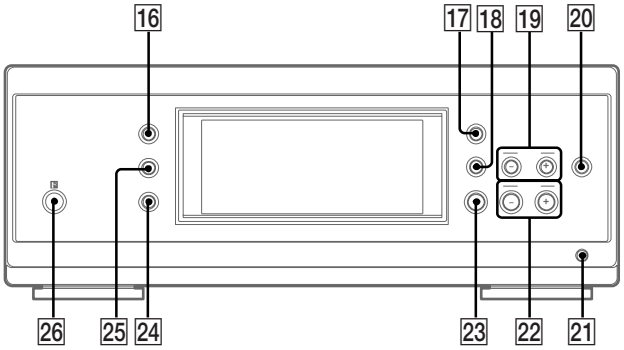
MODEL	PART No.
AEP and UK models	4-232-327-0□
Australian model	4-232-327-1□
Mexican model	4-232-327-4□
Korean model	4-232-327-9□

SECTION 2
GENERAL

This section is extracted from instruction manual.

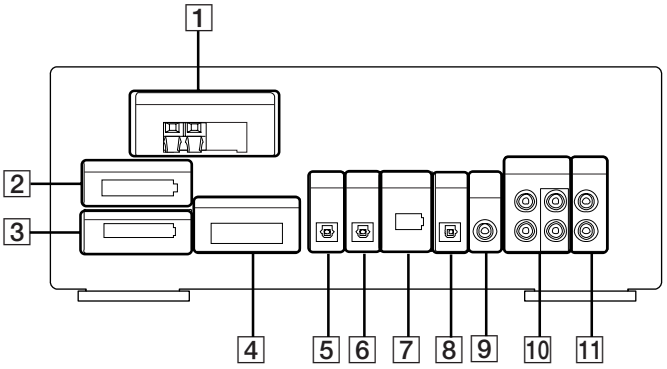
LOCATION OF CONTROLS

– Front Panel –



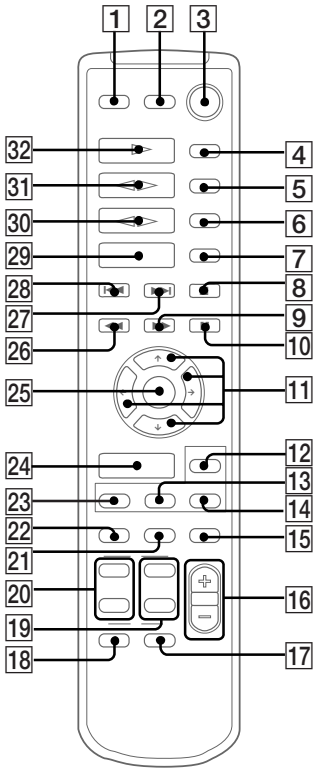
CLOCK/TIMER 25 (13, 21, 29)
DISPLAY 16 (13, 16, 18, 29, 35)
ENTER 20 (17, 18)
IR receptor 26
PRESET +/– 22 (17, 18)
PTY (AEP, UK models only) 21 (18)
STEREO/MONO 17 (17)
TIMER SELECT 24 (22, 30)
TUNER/BAND 23 (17)
TUNER MEMORY 18 (17)
TUNING +/– 19 (17)

– Rear Panel –



1 ANTENNA terminal
2 SYSTEM CONTROL 1 connector (TO TA-S7AV)
3 SYSTEM CONTROL 2 connector (TO TA-S7AV)
4 SYSTEM CONTROL 3 connector (FROM CDP-S3)
5 OPTICAL IN terminal
6 OPTICAL IN terminal (FROM CDP-S3)
7 SYSTEM CONTROL 4 connector (TO TC-S3)
8 OPTICAL OUT terminal
9 SUB WOOFER OUT jack
10 MD IN/OUT jack
11 VIDEO (AUDIO) IN jack

Remote Control



CD ▷ 32 (14, 15)
CHECK 5 (15)
CLEAR 6 (15)
CLOCK/TIMER SELECT 17 (30)
CLOCK/TIMER SET 18 (13, 21, 29)
DBFB 15 (23)
DISPLAY 22 (13, 16, 18, 29, 35)
D.SKIP 4 (14)
ENTER 25 (10, 12, 13, 15, 17, 18, 21, 22, 26–30)
EQ 13 (27)
EQ ON/OFF 14 (10, 28)
FUNCTION 24 (10, 14, 15, 20, 21, 31)
GROOVE 21 (23)
SET UP 12 (10, 12, 26, 28, 29)
SLEEP 7 (29)
SUR 23 (25)
TAPE A ◁▷ 31 (19, 35)
TAPE B ◁▷ 30 (19, 20, 35)
TUNER/BAND 29 (17)
TUNING + 9 (17)
TUNING – 26 (17)
TV CH +/– 19
TV VOL +/– 20
TV I/⏻ 2
TV/VIDEO 1
VOL +/– 16

BUTTON DESCRIPTIONS

I/⏻ (power) 3
II (pause) 10
■ (stop) 8
I◀◀ (go back) 28
▶▶I (go forward) 27
◀◀ (rewind) 26
▶▶ (fast forward) 9
↑/↓/←/→ 11

Setting the time

1 Turn on the system.

2 Press CLOCK/TIMER (or CLOCK/TIMER SET on the remote).

When you set the time for the first time, proceed to step 5.

3 Press ↑ or ↓ repeatedly to select "CLOCK SET".

4 Press ENTER (A/V amplifier or remote).

5 Press ↑ or ↓ repeatedly to set the hour.

6 Press ENTER (A/V amplifier or remote).

7 Press ↑ or ↓ repeatedly to set the minutes.

8 Press ENTER (A/V amplifier or remote).

Tip

If you have made a mistake or want to change the time, start over from step 2.

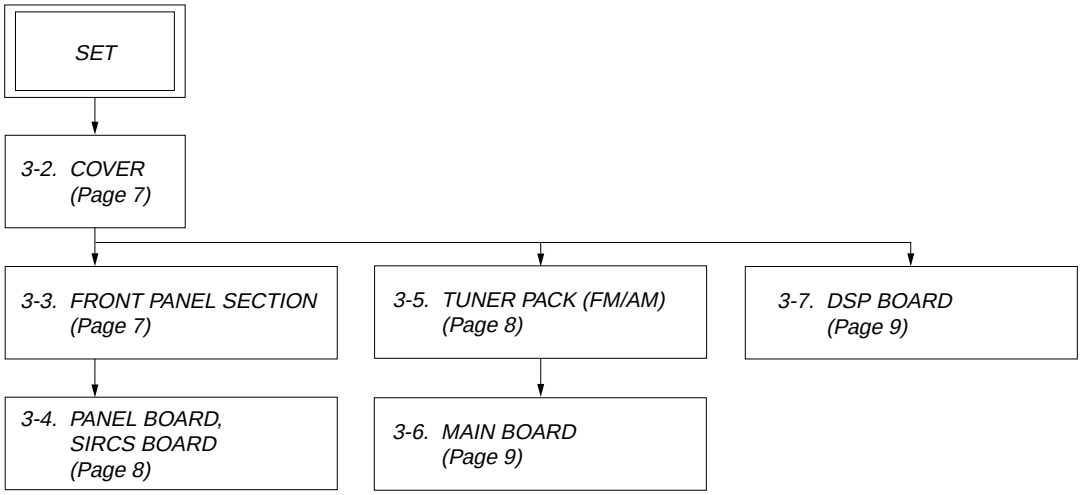
Note

The clock settings are canceled when you disconnect the power cord or if a power failure occurs.

SECTION 3
DISASSEMBLY

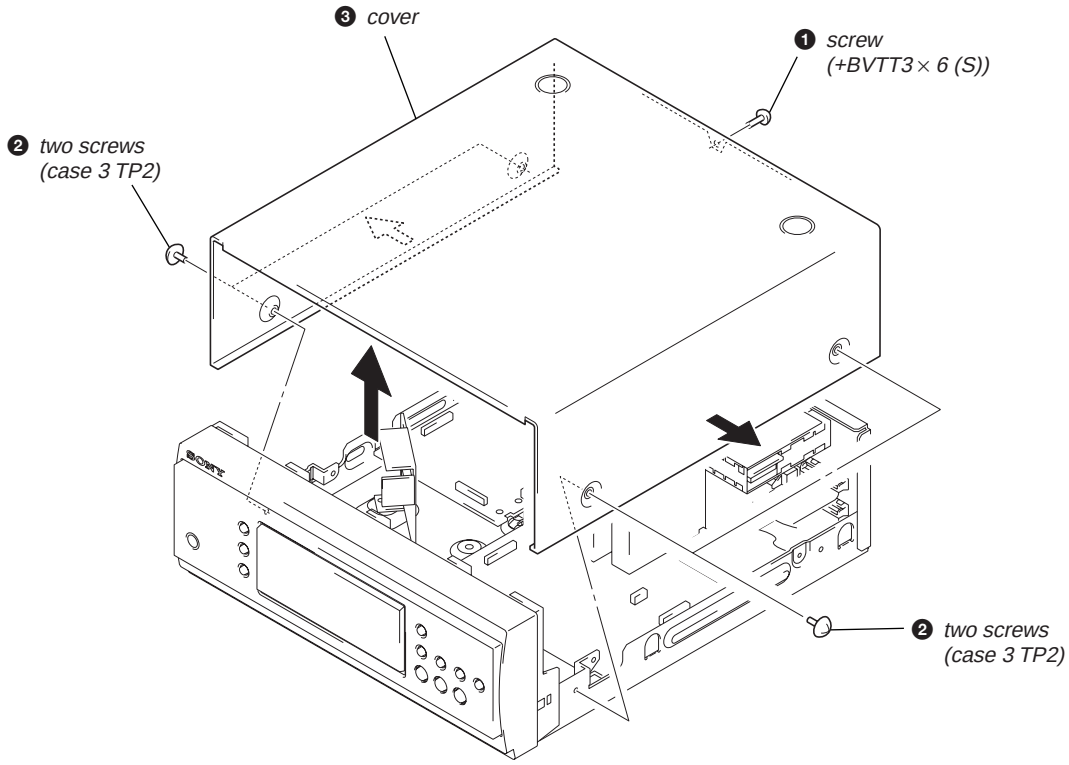
• This set can be disassembled in the order shown below.

3-1. DISASSEMBLY FLOW

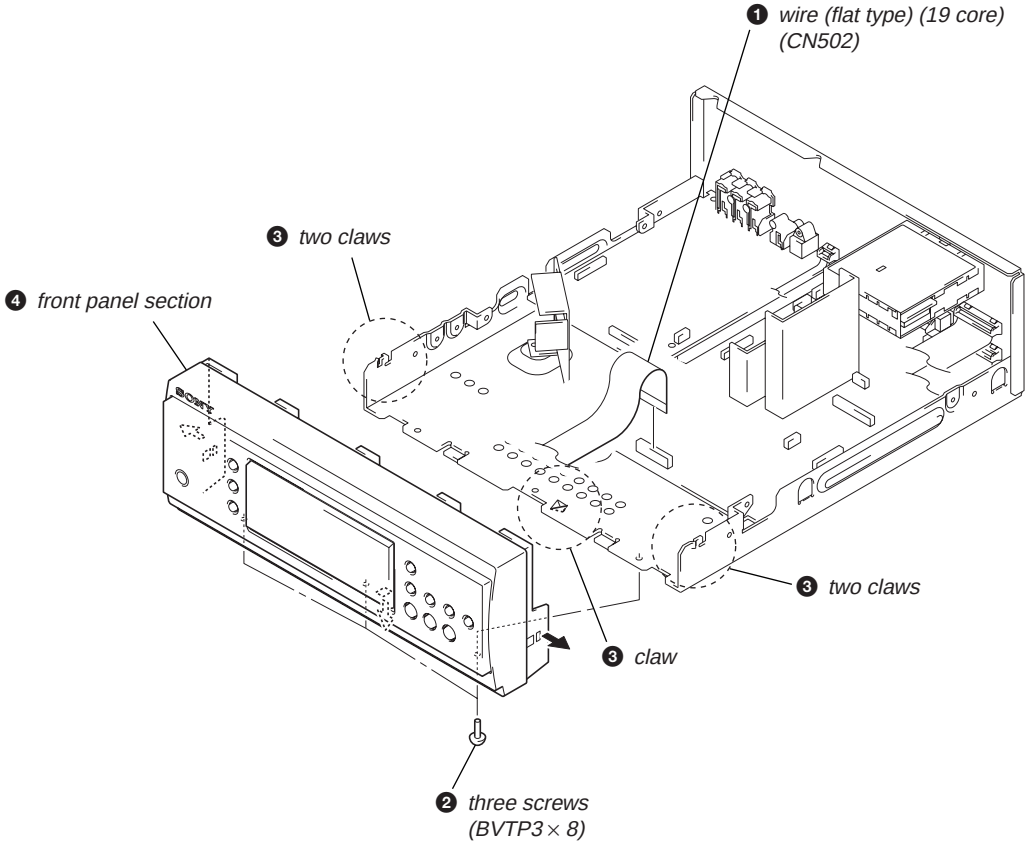


Note: Follow the disassembly procedure in the numerical order given.

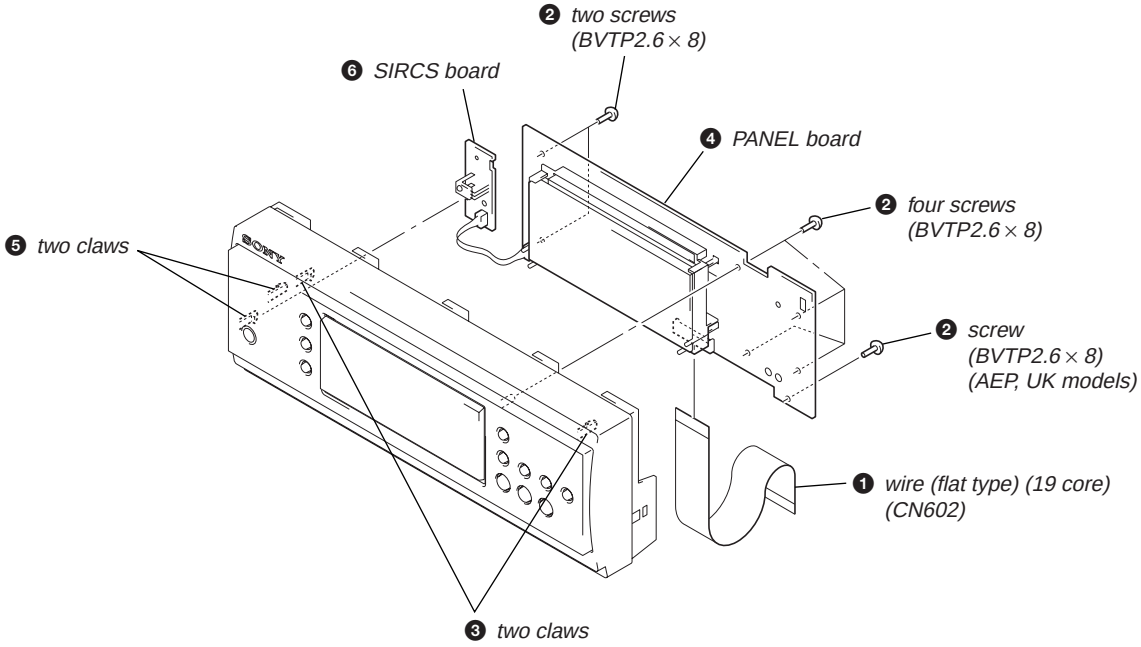
3-2. COVER



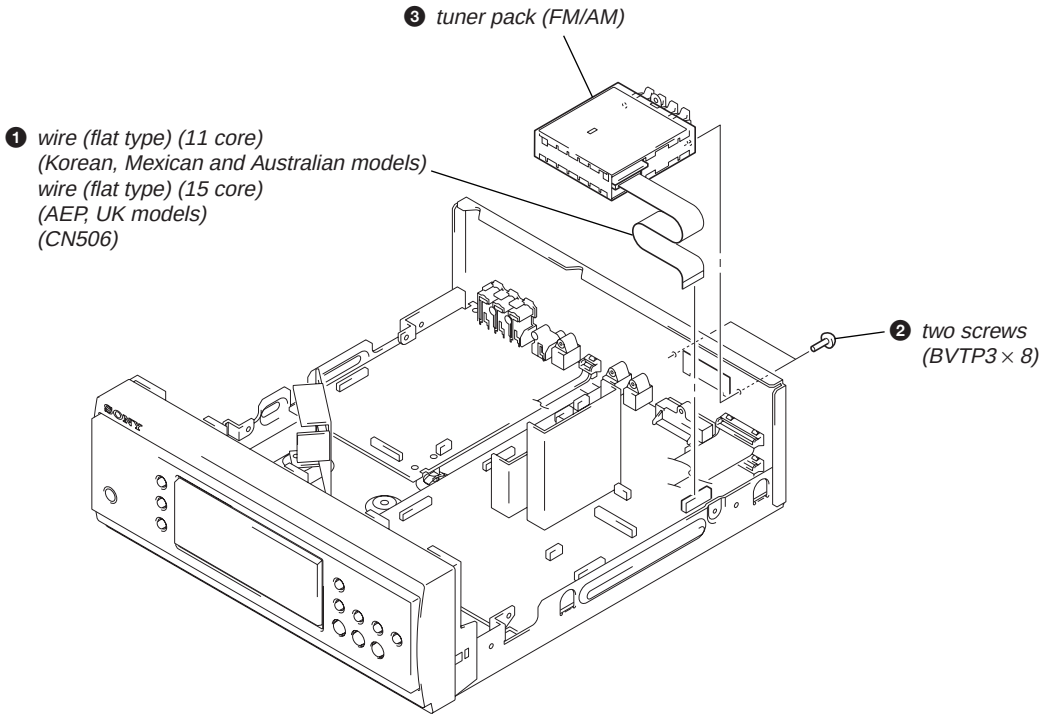
3-3. FRONT PANEL SECTION



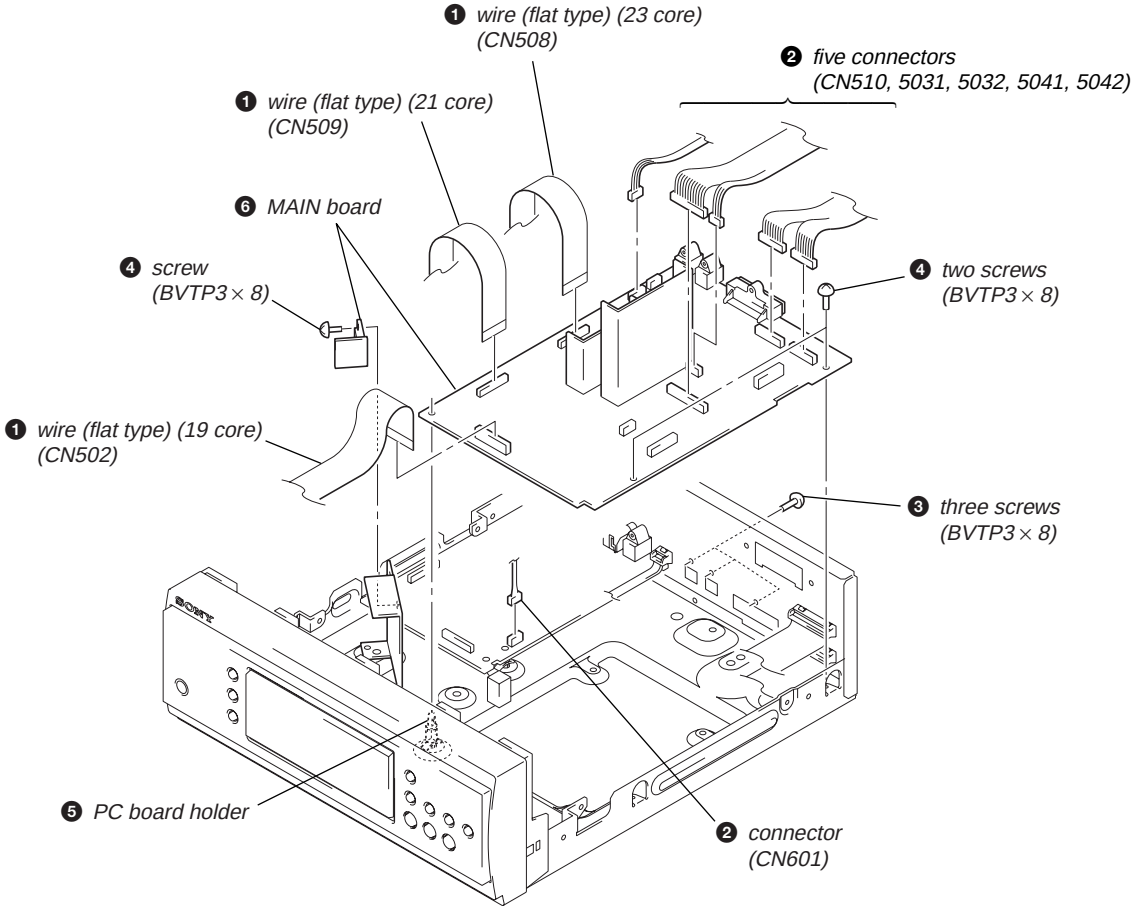
3-4. PANEL BOARD, SIRCS BOARD



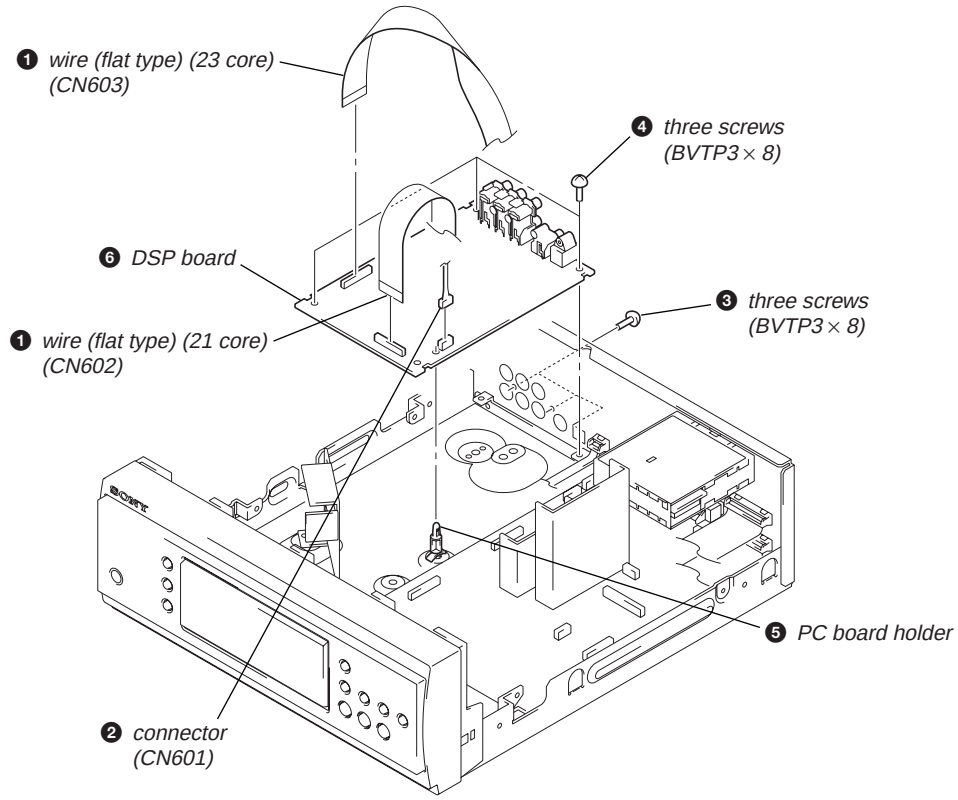
3-5. TUNER PACK (FM/AM)



3-6. MAIN BOARD


❶ wire (flat type) (23 core) (CN508)
❷ five connectors (CN510, 5031, 5032, 5041, 5042)
❶ wire (flat type) (21 core) (CN509)
❻ MAIN board
❹ screw (BVTP3 × 8)
❹ two screws (BVTP3 × 8)
❶ wire (flat type) (19 core) (CN502)
❸ three screws (BVTP3 × 8)
❺ PC board holder
❷ connector (CN601)

3-7. DSP BOARD


❶ wire (flat type) (23 core) (CN603)
❹ three screws (BVTP3 × 8)
❻ DSP board
❸ three screws (BVTP3 × 8)
❶ wire (flat type) (21 core) (CN602)
❺ PC board holder
❷ connector (CN601)

SECTION 4
TEST MODE

Note: Use flowing buttons in the test mode.
no mark : Button of tuner unit (ST-S5)
*1 : Button of amplifier unit (TA-S7AV)
*2 : Button of CD unit (CDP-S3)

[MC Cold Reset]

- The cold reset clears all data including preset data stored in the RAM to initial conditions. Execute this mode when returning the set to the customer.

Procedure 1:

1. Press the [I/⏻] *1 button to turn the power ON.
2. While pressing the [DIGITAL] *1 button, press the [DISPLAY] button.
3. The set is reset, and becomes standby state.

Procedure 2:

1. Press the [I/⏻] *1 button to turn the power ON.
2. While pressing the both [PLAY MODE] *2 and [■] *2 buttons, press the [▶▶] *2 button.
3. The set is reset, and becomes standby state.

[MC Hot Reset]

- This mode resets the set with the preset data kept stored in the memory. The hot reset mode functions same as if the power cord is plugged in and out.

Procedure 1:

1. Press the [I/⏻] *1 button to turn the power ON.
2. While pressing the both [STEREO/MONO] and [CINEMA STUDIO C] *1 buttons, press the [TIMER SELECT] button.
3. The set is reset, and becomes standby state.

Procedure 2:

1. Press the [I/⏻] *1 button to turn the power ON.
2. While pressing the both [PLAY MODE] *2 and [■] *2 buttons, press the [◀◀] *2 button.
3. The set is reset, and becomes standby state.

[Change-over the AM Tuning Interval] (EXCEPT AEP and UK models)

- The AM tuning interval can be changed over 9 kHz or 10 kHz.

Procedure:

1. Press the [I/⏻] *1 button to turn the power ON.
2. Turn the [FUNCTION] *1 knob to select "TUNER", and press the [TUNER/BAND] button to select the BAND "AM".
3. Press the [I/⏻] *1 button to turn the power OFF.
4. While pressing the [ENTER] button, press the [I/⏻] *1 button, and the display on the fluorescent indicator tube changes to "AM 9 K STEP" or "AM 10 K STEP", and thus the tuning interval is changed over.

[Change-over of VACS ON/OFF]

1. Press the [I/⏻] *1 button to turn the power ON.
2. While pressing the both [STEREO/MONO] and [CINEMA STUDIO C] *1 buttons, press the [CINEMA STUDIO B] button, and VACS ON/OFF is change over.

[GC Test Mode]
Enter the GC Test Mode mode

Procedure 1:

1. Press the [I/⏻] *1 button to turn the power ON.
2. While pressing the both [STEREO/MONO] and [CINEMA STUDIO C] *1 buttons, press the [CLOCK/TIMER] button.
3. LEDs and fluorescent indicator tube are all turned on of all units.

Procedure 2:

1. Press the [I/⏻] *1 button to turn the power ON.
2. While pressing the both [PLAY MODE] *2 and [■] *2 buttons, press the [⏏] (DISC 1)*2 button.
3. LEDs and fluorescent indicator tube are all turned on of all units.

Version Display Mode

Procedure:

1. Enter the GC test mode.
2. Each time the [TUNER MEMORY] or [DISC 1] *2 button is pressed, microcomputer or mechanism deck version is displayed of each unit.
3. Press the [TUNING +] or [DISC 3] *2 button to detail is displayed the version.

Key Check Mode

Procedure:

1. Enter the GC test mode.
2. Press the [TUNING –] or [DISC 2] *2 button to set the key check mode.
3. In the key check the mode, the fluorescent indicator tube displays "K 0 J 0 V 0" . Each time a button is pressed, "K" value increases. However, once a button is pressed, it is no longer taken into account.

VACS Level Display Mode

Procedure:

1. Enter the GC test mode.
2. Press the [TUNING +] or [DISC 3] *2 button to display VACS level on the fluorescent indicator tube.

Segment Check Mode

Procedure:

1. Enter the GC test mode.
2. Press the [ENTER] or [■] *2 button to set the segment check mode.
3. In the segment check the mode. Each [ENTER] or [■] *2 button is pressed, the fluorescent indicator tube displays is switching variously.

Releasing the GC Test Mode

- To release from this mode, press three buttons in the same manner as entering this mode or disconnect the power cord.

SECTION 5
DIAGRAMS

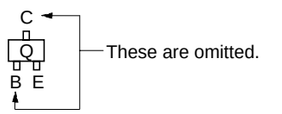
5-1. NOTE FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

Note on Printed Wiring Board:
- ○——— : parts extracted from the component side.
- ——— : parts extracted from the conductor side.
- ▬ : Pattern from the side which enables seeing.

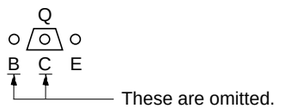
(The other layers' patterns are not indicated.)

Caution:	
Pattern face side: (Conductor Side)	Parts on the pattern face side seen from the pattern face are indicated.
Parts face side: (Component Side)	Parts on the parts face side seen from the parts face are indicated.

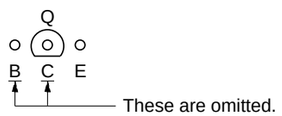
- Indication of transistor.



These are omitted.



These are omitted.



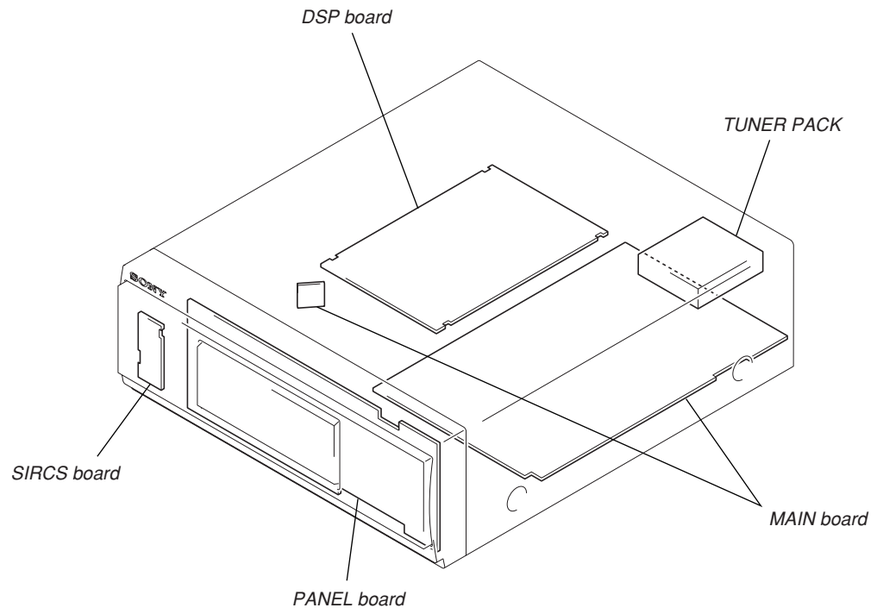
These are omitted.

Note on Schematic Diagram:
- All capacitors are in µF unless otherwise noted. pF: µµF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- △ : internal component.
- : fusible resistor.
- : panel designation.

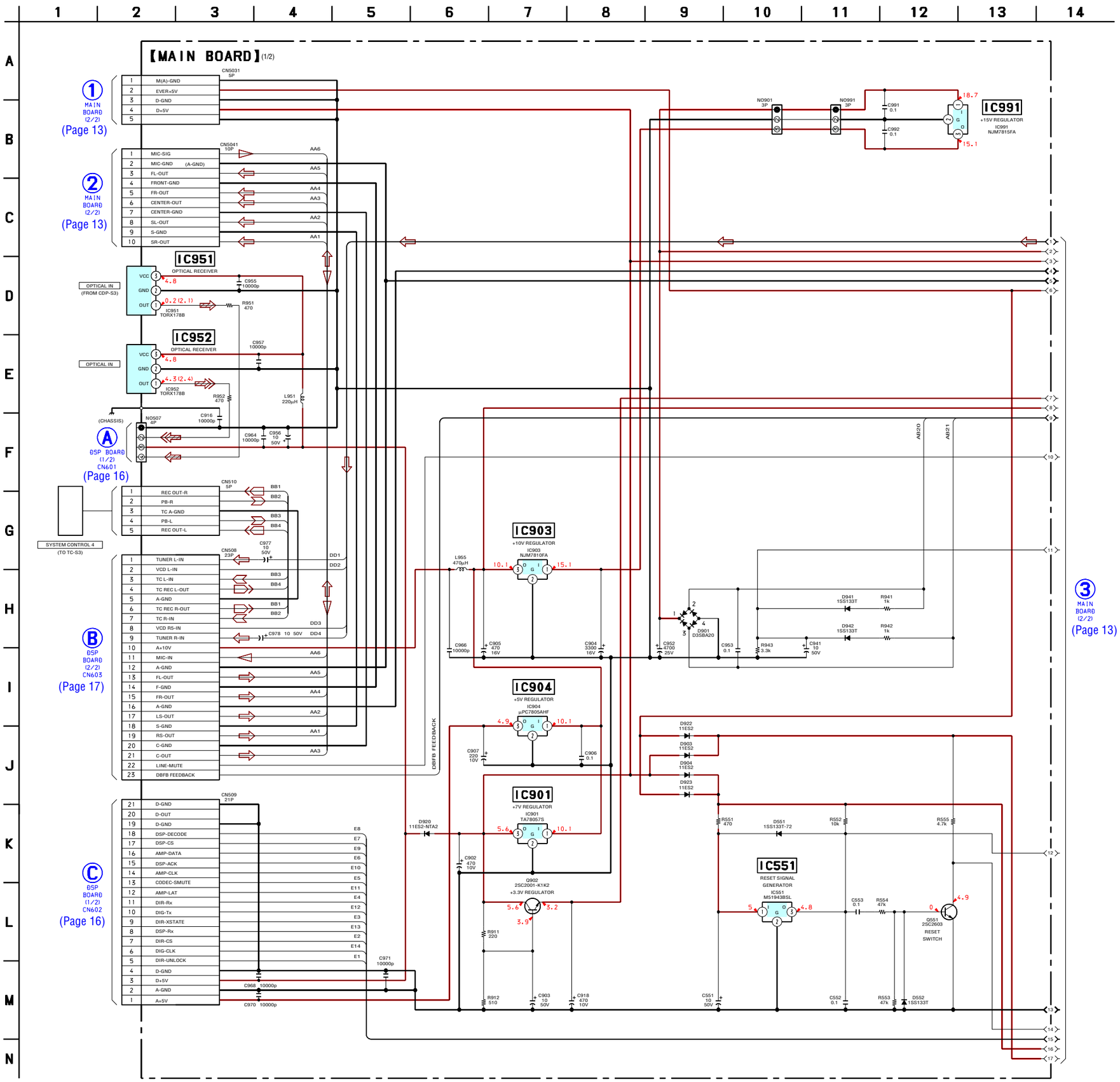
Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

- ▬▬ : B+ Line.
- ▬ ▬ ▬ : B– Line.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark : TUNER (FM/AM)
  ( ) : CD PLAY
  ⟨⟨ ⟩⟩ : AC OFF
  * : Impossible to measure
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Signal path.
  : TUNER (FM/AM)
  : TAPE PLAY
  : RECORD
  : CD PLAY
  : DIGITAL INPUT
  : MIC INPUT
- Abbreviation
  AUS : Australian model
  KR : Korean model
  MX : Mexican model

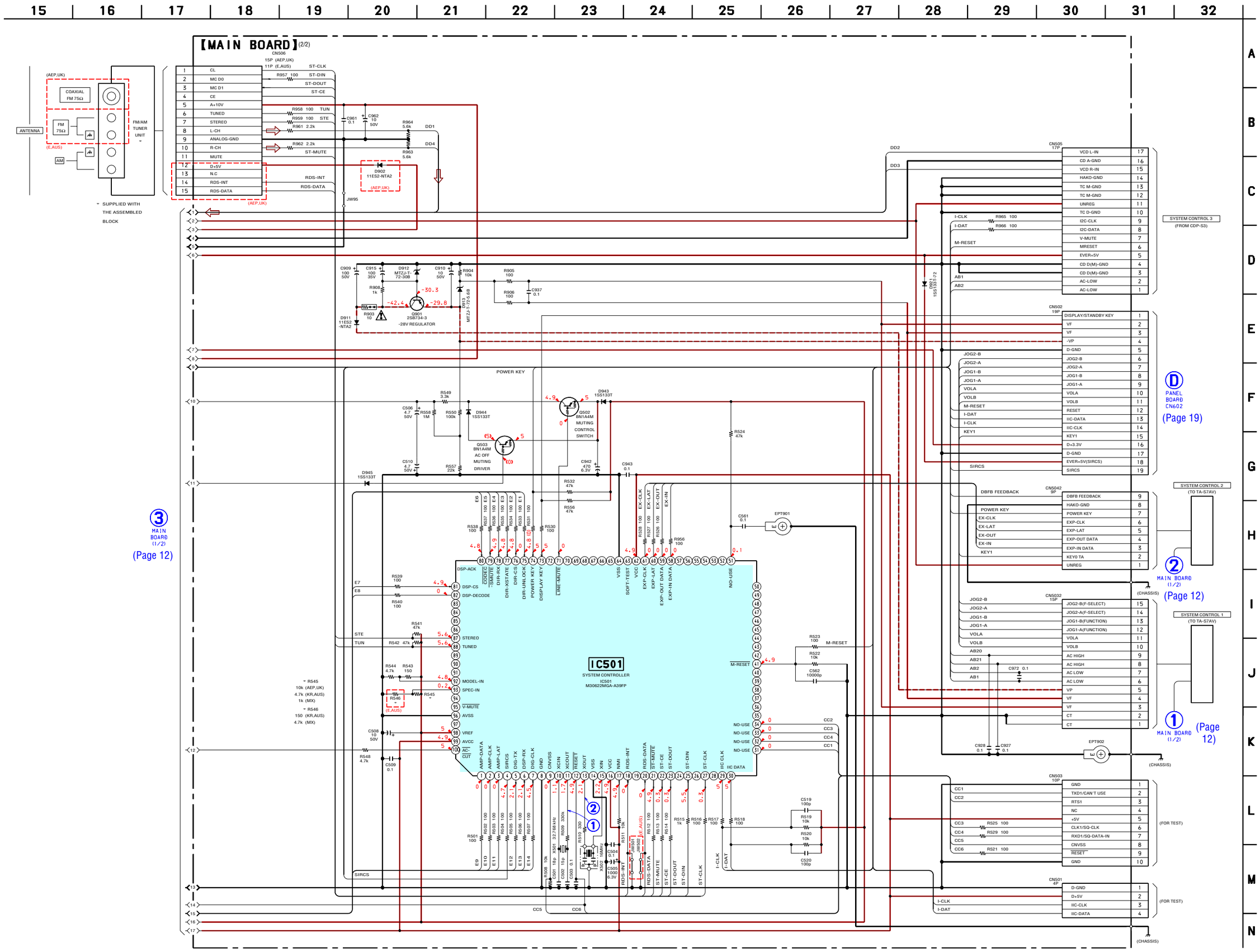
- **Circuit Boards Location**



5-2. SCHEMATIC DIAGRAM – MAIN Board (1/2) –



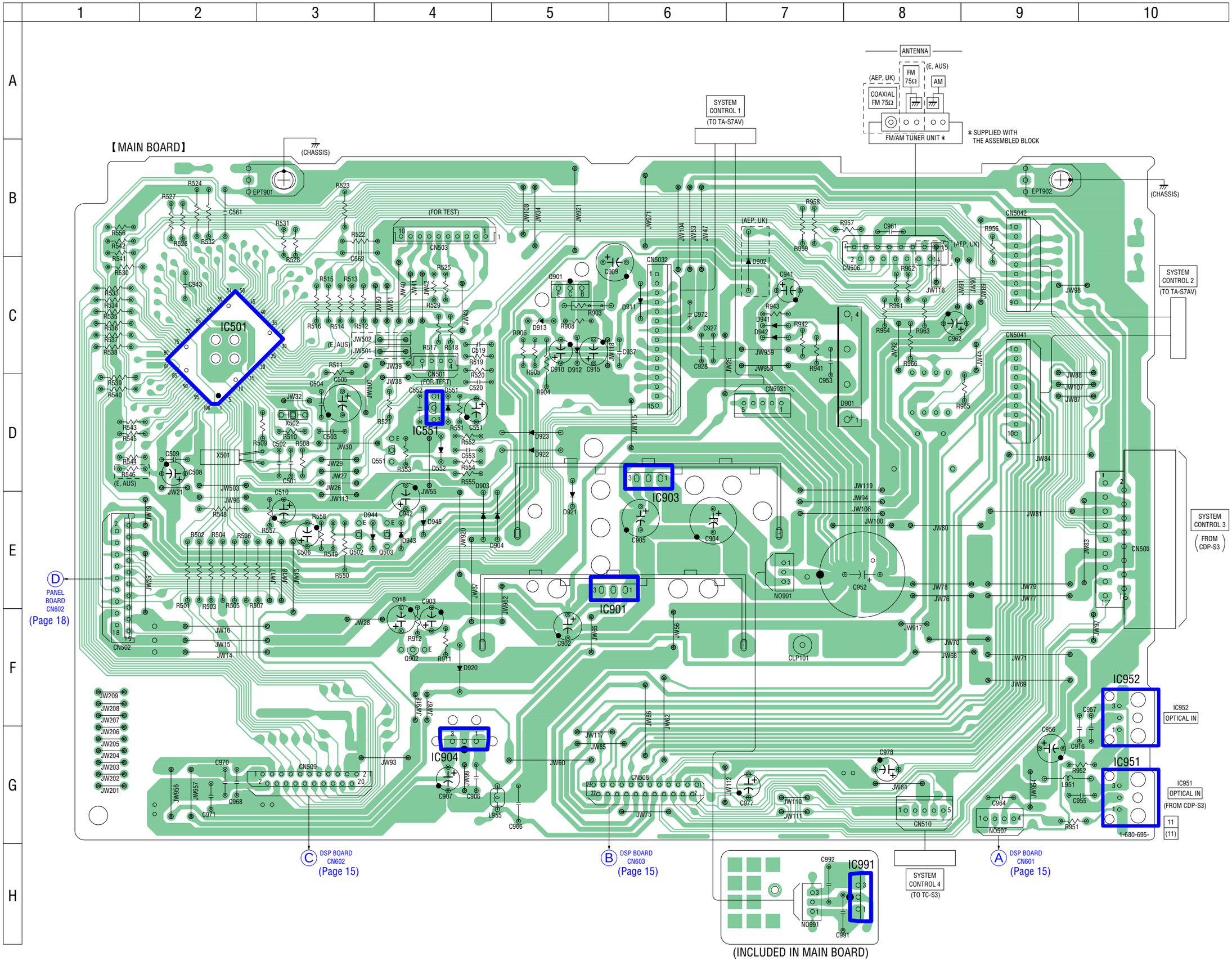
5-3. SCHEMATIC DIAGRAM – MAIN Board (2/2) – • See page 20 for Waveforms.



5-4. PRINTED WIRING BOARD – MAIN Board – • See page 11 for Circuit Boards Location.

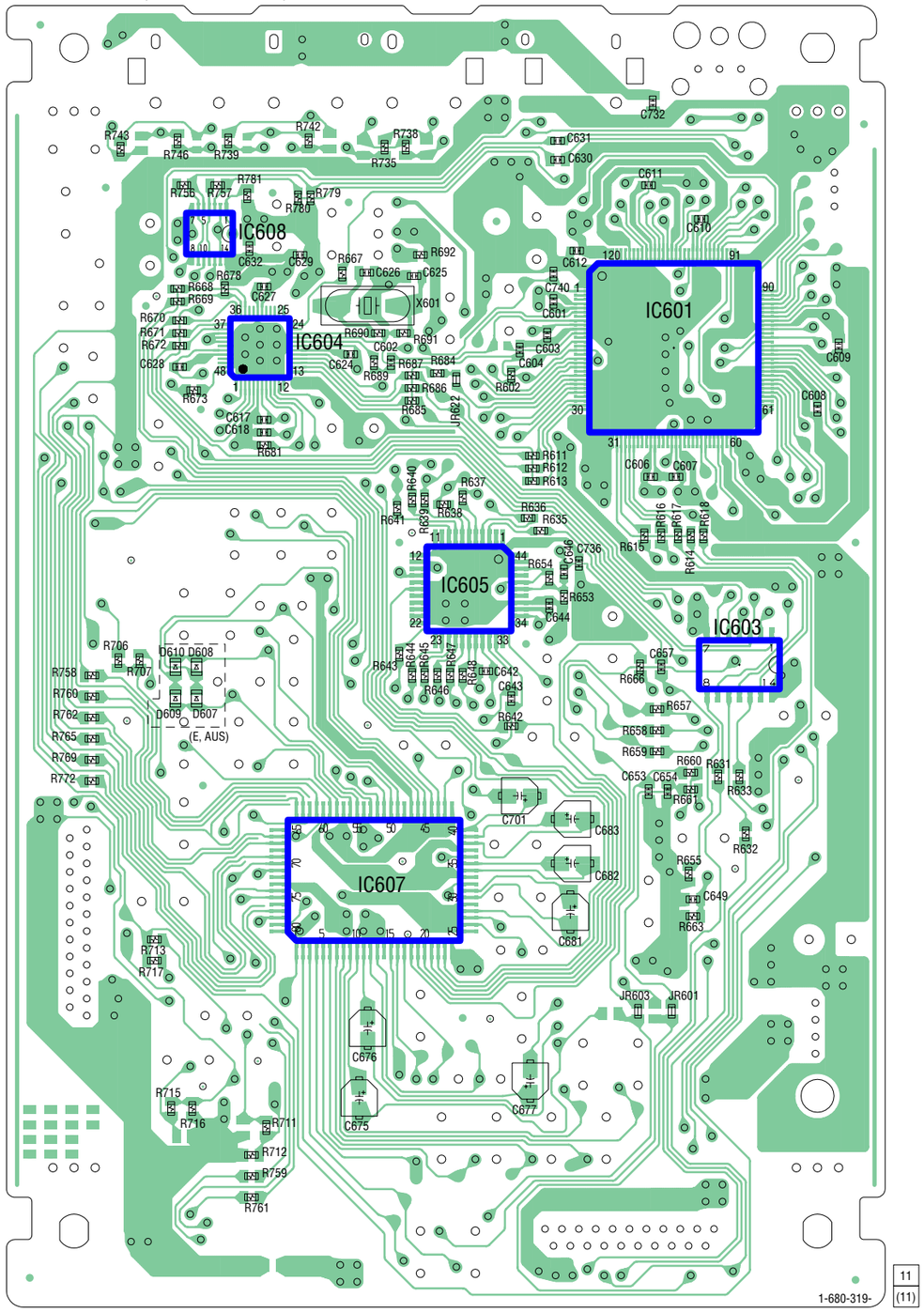
- **Semiconductor Location**

Ref. No.	Location
D551	D-4
D552	D-4
D901	C-8
D902	C-7
D903	E-4
D904	E-5
D911	C-6
D912	C-5
D913	C-5
D920	F-4
D921	E-5
D922	D-5
D923	D-5
D941	C-7
D942	C-7
D943	E-4
D944	E-3
D945	E-4
IC501	C-2
IC551	D-4
IC901	E-6
IC903	D-6
IC904	G-4
IC951	G-10
IC952	F-10
IC991	H-8
Q502	E-3
Q503	E-4
Q551	D-4
Q901	C-5
Q902	F-4

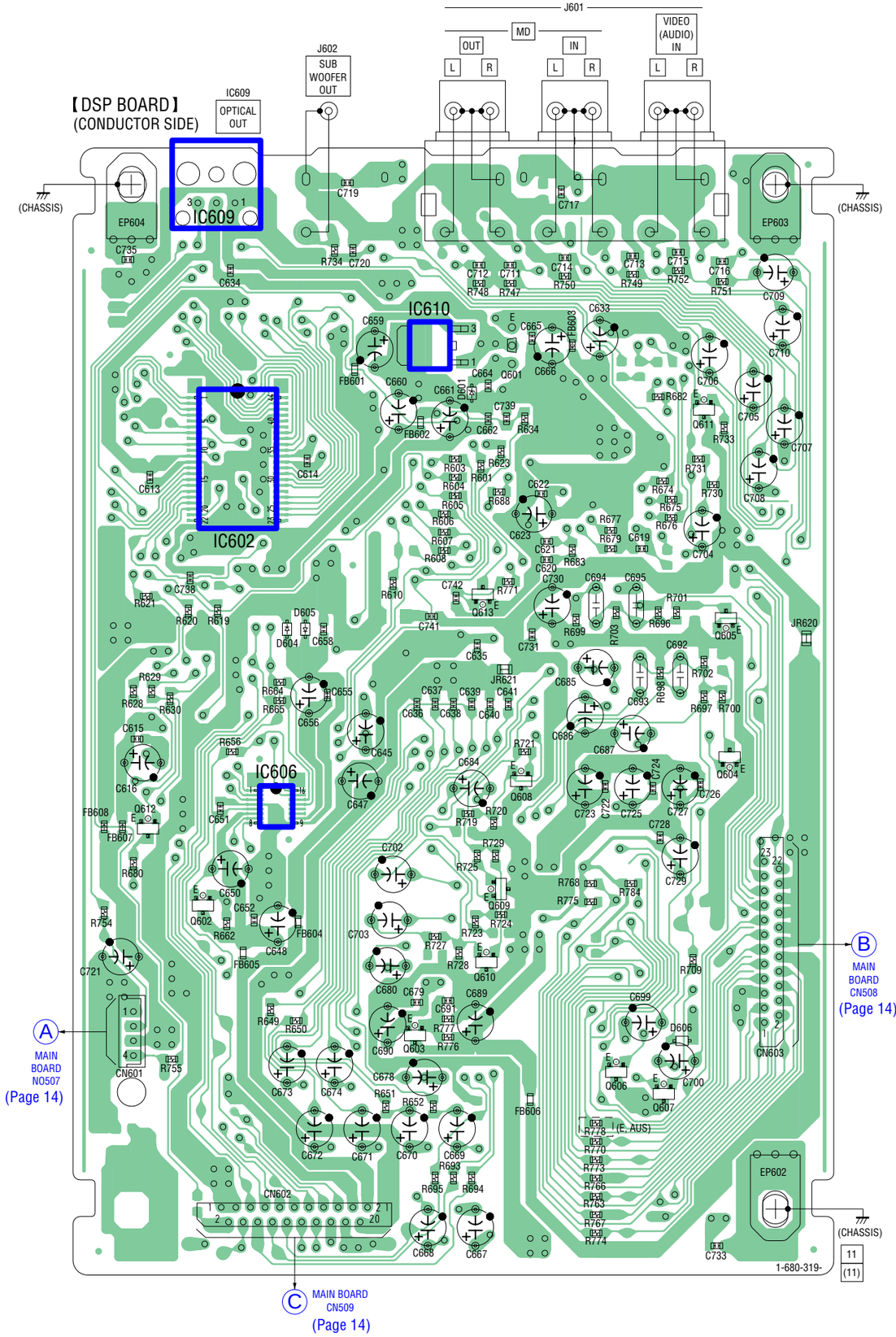


5-5. PRINTED WIRING BOARD – DSP Board – • See page 11 for Circuit Boards Location.

【DSP BOARD】(COMPONENT SIDE)



【DSP BOARD】
(CONDUCTOR SIDE)

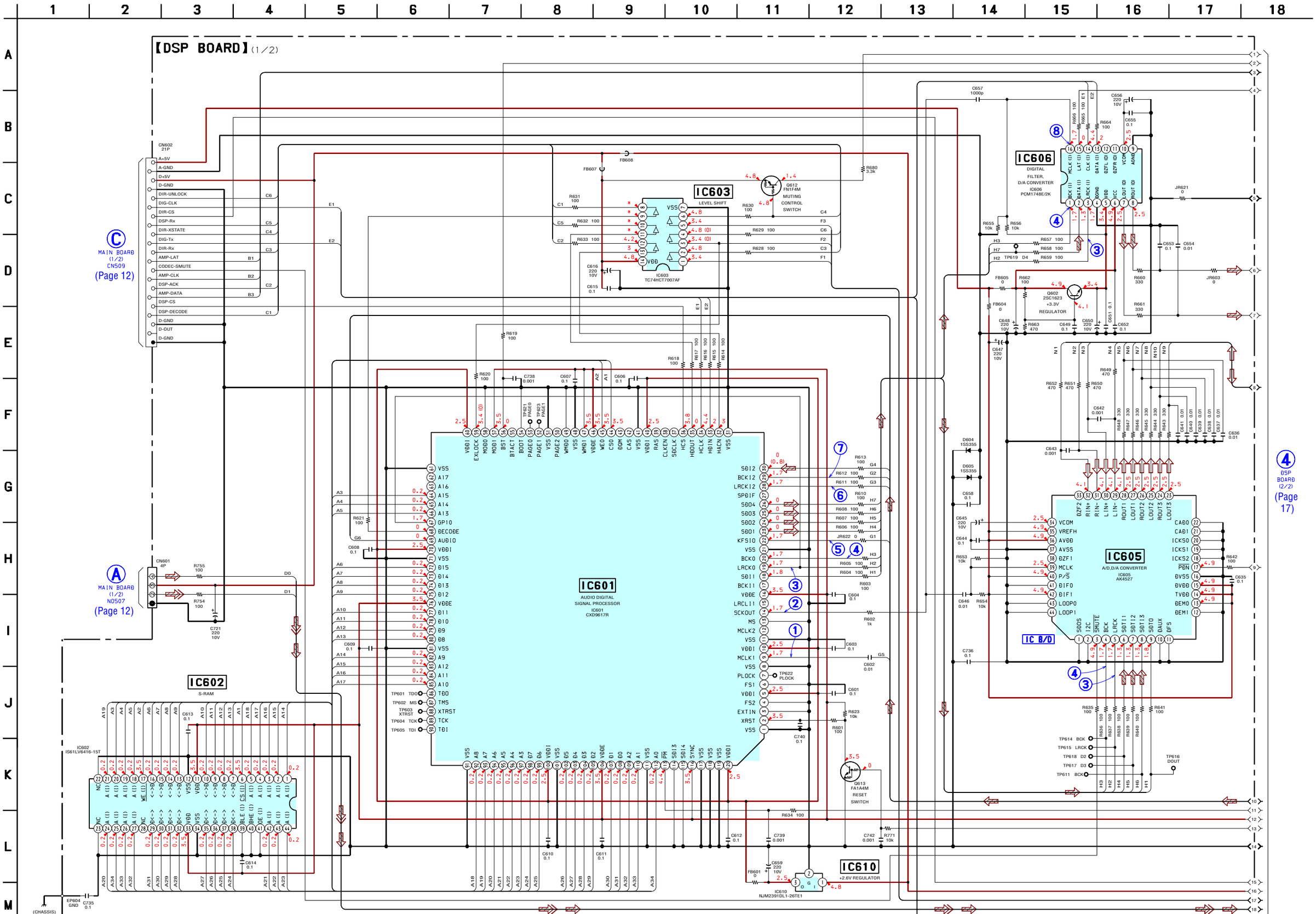


- **Semiconductor Location**

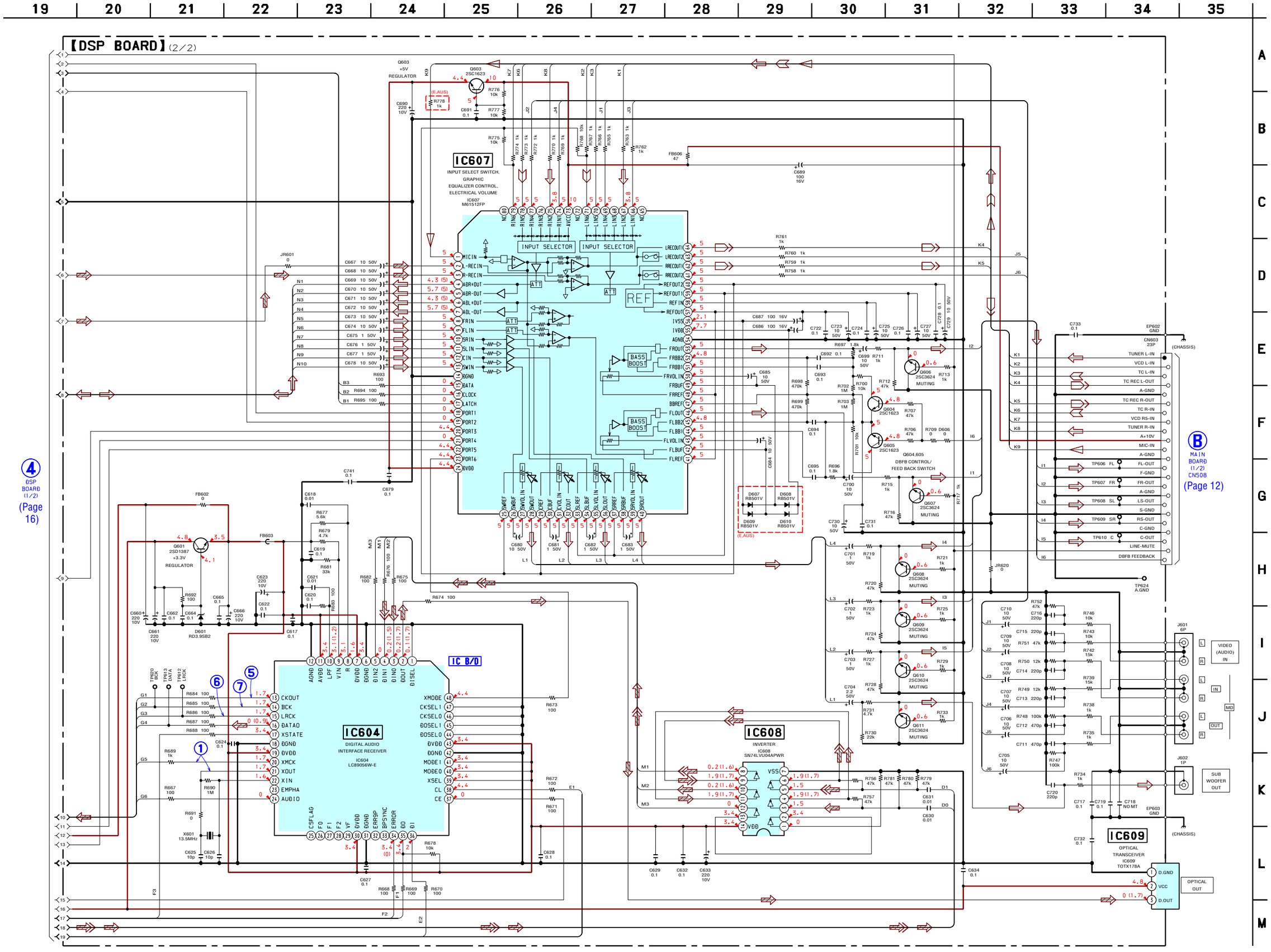
Ref. No.	Location
D601	C-8
D604	D-7
D605	D-7
D607	E-2
D608	E-2
D609	E-1
D610	E-1
IC601	C-4
IC602	C-6
IC603	E-4
IC604	C-2
IC605	D-3
IC606	E-7
IC607	F-2
IC608	C-2
IC609	B-6
IC610	C-7
Q601	C-8
Q602	F-6
Q603	F-7
Q604	E-9
Q605	D-9
Q606	G-8
Q607	G-9
Q608	E-8
Q609	F-8
Q610	F-8
Q611	C-9
Q612	E-6
Q613	D-8

5-6. SCHEMATIC DIAGRAM – DSP Board (1/2) –

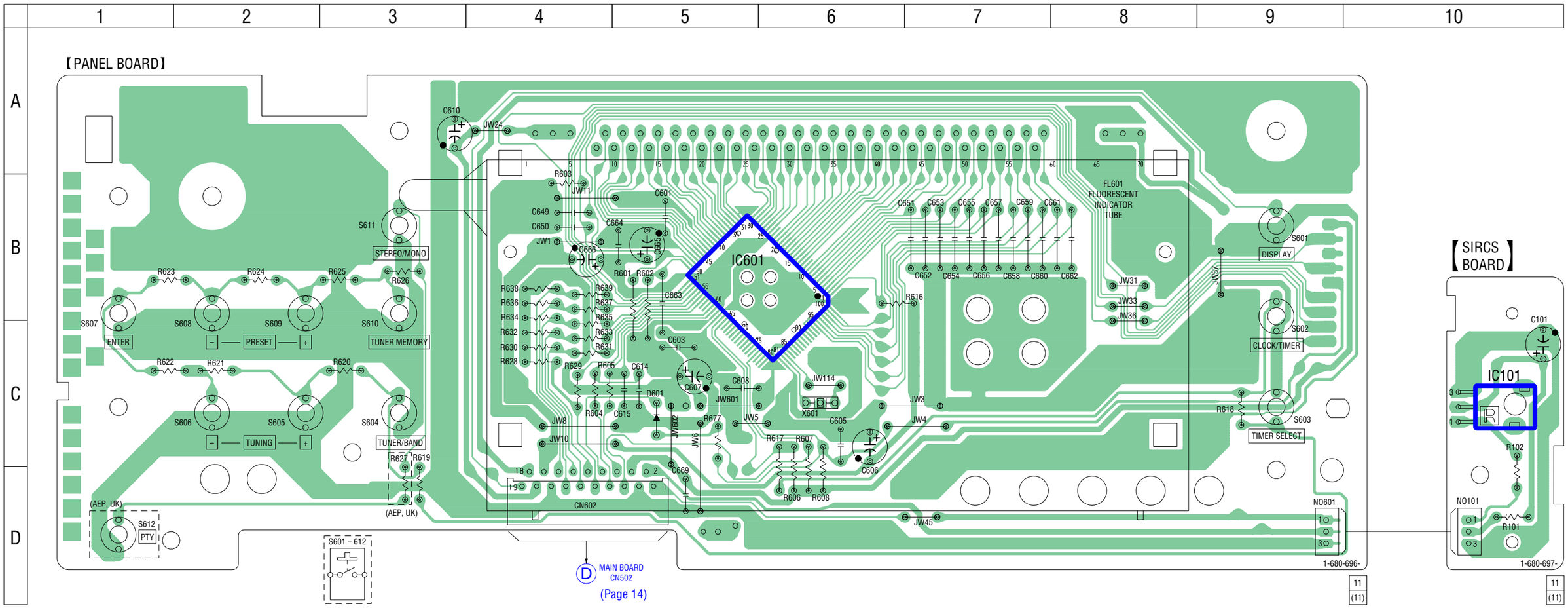
• See page 20 for Waveforms. • See page 20 for IC Block Diagram.



5-7. SCHEMATIC DIAGRAM – DSP Board (2/2) – • See page 20 for Waveforms. • See page 20 for IC Block Diagram.



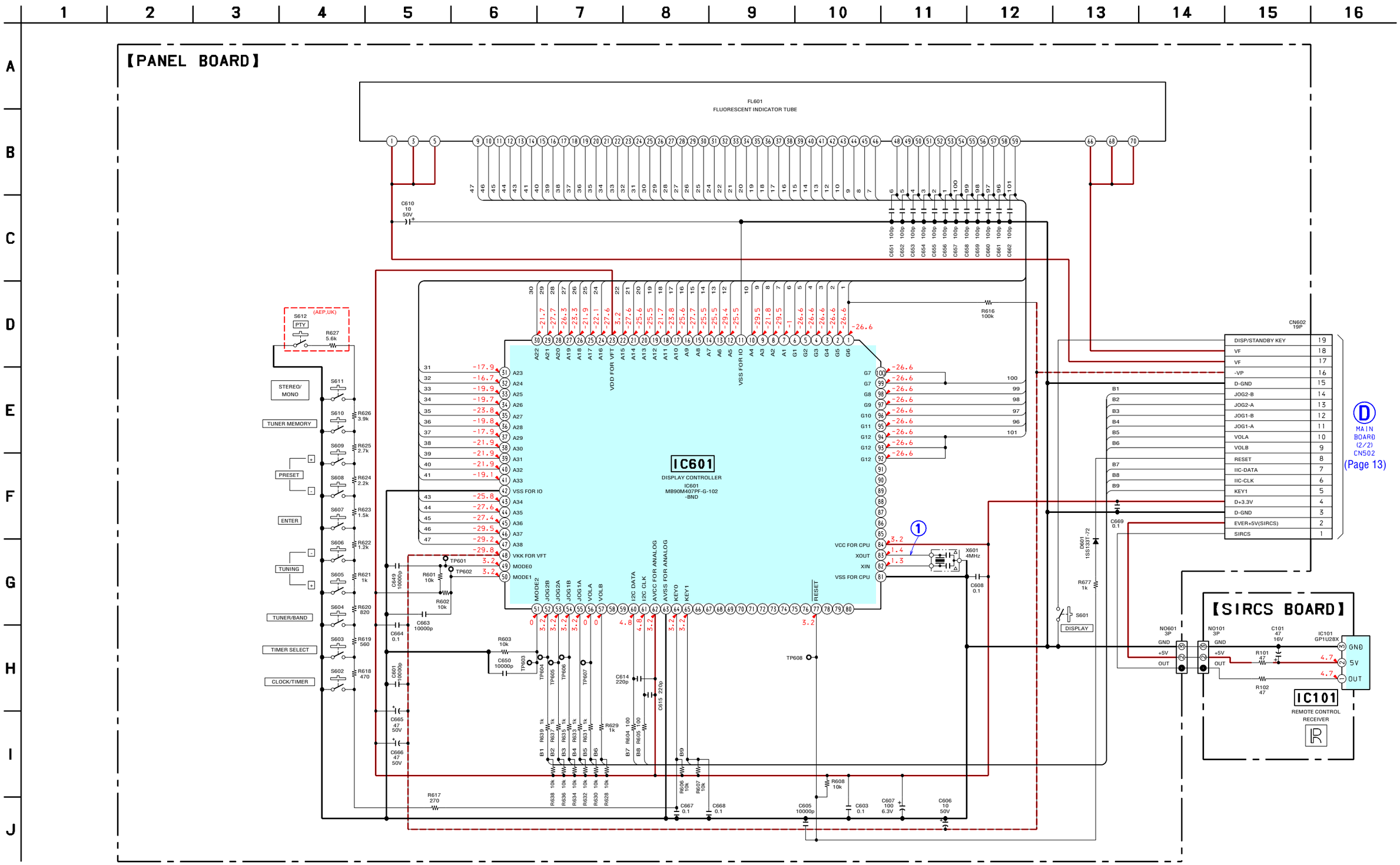
5-8. PRINTED WIRING BOARDS – PANEL Section – • See page 20 for Circuit Boards Location.



- **Semiconductor Location**

Ref. No.	Location
D601	C-5
IC101	C-10
IC601	B-5

5-9. SCHEMATIC DIAGRAM – PANEL Section – • See page 20 for Waveform.

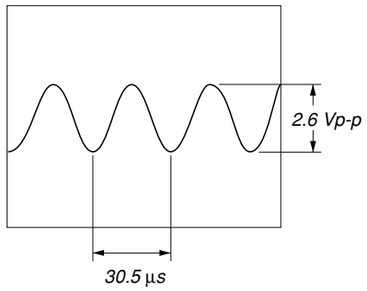


ST-S5

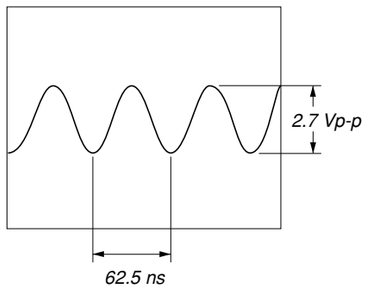
• Waveforms

– MAIN Board –

❶ IC501 ⑪ (XCOUT)

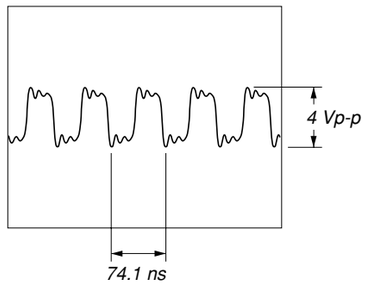


❷ IC501 ⑬ (XOUT)

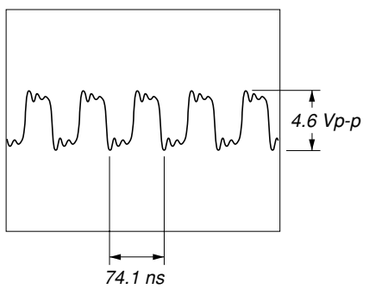


– DSP Board –

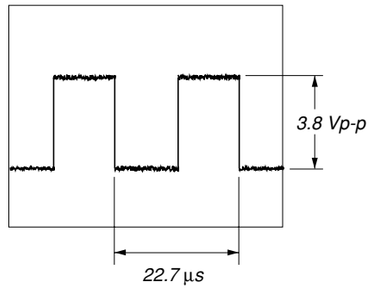
❶ IC601 ⑨ (MCLK1), IC604 ⑳ (XMCK), ㉑ (XOUT)



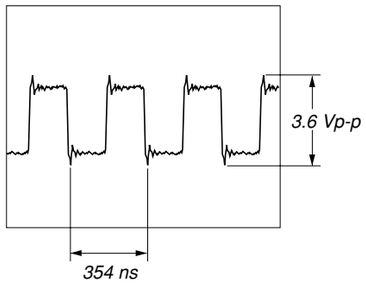
❷ IC601 ⑭ (SCKOUT)



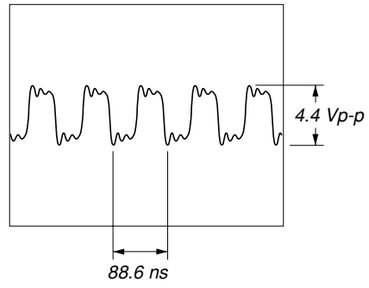
❸ IC601 ⑲ (LRCKO), IC605 ⑤ (LRCK), IC606 ③ (LRCK (I))



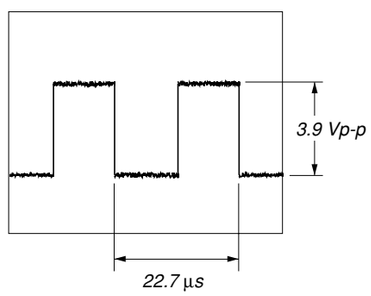
❹ IC601 ⑳ (BCKO), IC605 ④ (BCK), IC606 ① (BCK (I))



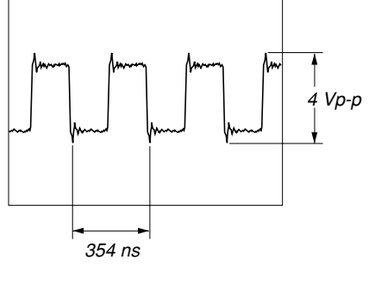
❺ IC601 ㉒ (KFSIO), IC604 ⑬ (CKOUT)



❻ IC601 ㉘ (LRCKI2), IC604 ⑮ (LRCK)

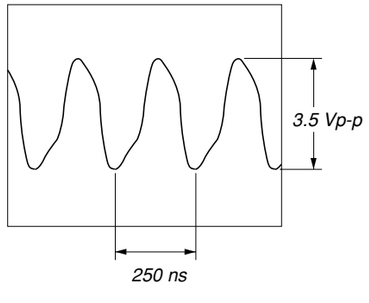


❼ IC601 ㉙ (BCKI2), IC604 ⑭ (BCK)

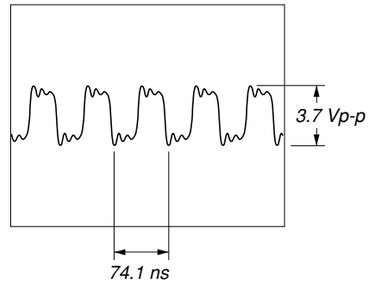


– PANEL Board –

❶ IC601 ㊸ (XOUT)



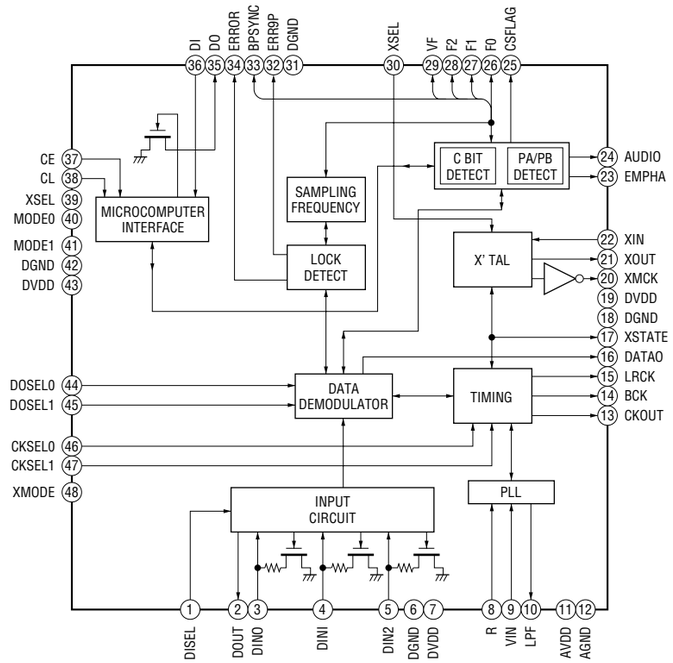
❽ IC606 ⑯ (MCLK (I))



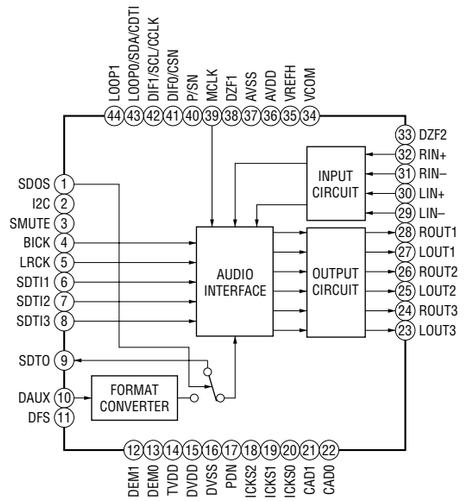
• IC Block Diagrams

– DSP Board –

IC604 LC89056W-E



IC605 AK4527



5-10. IC PIN FUNCTION DESCRIPTION

• MAIN BOARD IC501 M30622MGA-A39FP (SYSTEM CONTROLLER)

Pin No.	Pin Name	I/O	Description
1	AMP-DATA	O	Serial data output to the M61512FP (IC607)
2	AMP-CLK	O	Serial data transfer clock signal output to the M61512FP (IC607)
3	AMP-LAT	O	Serial data latch pulse signal output to the M61512FP (IC607)
4	SIRCS	I	Remote control signal input from the remote control receiver (IC101)
5	DIG-TX	O	Serial data output to the CXD9617R (IC601), digital audio interface receiver (IC604) and digital filter (IC606)
6	DSP-RX	I	Serial data input from the digital audio interface receiver (IC604)
7	DIG-CLK	O	Serial data transfer clock signal output to the CXD9617R (IC601), digital audio interface receiver (IC604) and digital filter (IC606)
8	GND	—	Ground terminal
9	CNVSS	—	Not used
10	XCIN	I	Sub system clock input terminal (32.768 kHz)
11	XCOUT	O	Sub system clock output terminal (32.768 kHz)
12	$\overline{\text{RESET}}$	I	System reset signal input from the reset signal generator (IC551) "L": reset For several hundreds msec. after the power supply rises, "L" is input, then it changes to "H"
13	XOUT	O	Main system clock output terminal (16 MHz)
14	VSS	—	Ground terminal
15	XIN	I	Main system clock input terminal (16 MHz)
16	VCC	—	Power supply terminal (+5V)
17	NMI	I	Non-maskable interrupt input terminal Fixed at "H" in this set
18	RDS-INT	I	Serial data transfer clock signal from the RDS decoder on the FM/AM tuner unit
19	—	—	Not used (open)
20	RDS-DATA	I	Serial data input from the RDS decoder on the FM/AM tuner unit
21	$\overline{\text{ST-MUTE}}$	O	Tuner muting on/off control signal output to the FM/AM tuner unit "L": muting on
22	ST-CE	O	Chip enable signal output to the FM/AM tuner unit
23	ST-DOUT	O	Serial data output to the FM/AM tuner unit
24	—	—	Not used (open)
25	ST-DIN	I	Serial data input from the FM/AM tuner unit
26	—	—	Not used (open)
27	ST-CLK	O	Serial data transfer clock signal output to the FM/AM tuner unit
28	—	—	Not used (open)
29	IIC CLK	I/O	Communication data reading clock signal input or transfer clock signal output with the display controller (IC601) and CDP-S3
30	IIC DATA	I/O	Communication data bus with the display controller (IC601) and CDP-S3
31 to 34	NO-USE	—	Not used
35 to 40	—	—	Not used (open)
41	$\overline{\text{M-RESET}}$	O	Reset signal output to the display controller (IC601) "L": reset
42 to 50	—	—	Not used (open)
51	NO-USE	—	Not used
52 to 57	—	—	Not used (open)
58	EXP-IN DATA	I	Serial data input from the I/O expander in the TA-S7AV
59	EXP-OUT DATA	O	Serial data output to the I/O expander in the TA-S7AV
60	EXP-LAT	O	Serial data latch pulse signal output to the I/O expander in the TA-S7AV
61	EXP-CLK	O	Serial data transfer clock signal output to the I/O expander in the TA-S7AV
62	VCC	—	Power supply terminal (+5V)
63	SOFT-TEST	I	Soft test output terminal Not used (open)

Pin No.	Pin Name	I/O	Description
64	VSS	—	Ground terminal
65 to 70	—	—	Not used (open)
71	$\overline{\text{LINE-MUTE}}$	O	Audio line muting on/off control signal output to the audio line circuit "L": muting on
72	—	—	Not used (open)
73	DISPLAY KEY	I	DISPLAY switch (S601) input terminal
74	POWER KEY	I	Power on/off switch in the TA-S7AV input terminal
75	DIR-UNLOCK	I	PLL lock error and data error flag input from the digital audio interface receiver (IC604)
76	DIR-CS	O	Chip enable signal output to the digital audio interface receiver (IC604)
77	DIR-XSTATE	I	Source clock switching monitor input from the digital audio interface receiver (IC604)
78	DIR-RX	I	Read data input from the digital audio interface receiver (IC604)
79	$\overline{\text{CODEC-SMUTE}}$	O	Soft muting on/off control signal output to the A/D, D/A converter (IC605) "L": muting on
80	DSP-ACK	I	Acknowledge signal input from the CXD9617R (IC601)
81	DSP-CS	O	Chip select signal output to the CXD9617R (IC601)
82	DSP-DECODE	O	Decode signal input from the CXD9617R (IC601)
83 to 86	—	—	Not used (open)
87	STEREO	I	FM stereo detection signal input from the FM/AM tuner unit "L": stereo
88	TUNED	I	Tuning detection signal input from the FM/AM tuner unit "L": tuned
89 to 91	—	—	Not used (open)
92	MODEL-IN	I	Model setting terminal
93	SPEC-IN	I	Specification setting terminal
94	—	—	Not used (open)
95	$\overline{\text{V-MUTE}}$	O	Video muting on/off control signal output terminal "L": muting on Not used (open)
96	AVSS	—	Ground terminal
97	—	—	Not used (open)
98	VREF	I	Reference voltage (+5V) input terminal
99	AVCC	—	Power supply terminal (+5V)
100	$\overline{\text{AC-CUT}}$	I	AC cut on/off detection signal input from the reset signal generator (IC551) "L": AC cut on, "H": AC cut off or checked

• DSP BOARD IC601 CXD9617R (AUDIO DIGITAL SIGNAL PROCESSOR)

Pin No.	Pin Name	I/O	Description
1	VSS	—	Ground terminal
2	XRST	I	Reset signal input from the M61512FP (IC607) "L": reset
3	EXTIN	I	Master clock signal input terminal Not used (fixed at "L")
4	FS2	I	Sampling frequency selection signal input terminal Not used (fixed at "L")
5	VDDI	—	Power supply terminal (+2.6V)
6	FS1	I	Sampling frequency selection signal input terminal Not used (fixed at "L")
7	PLOCK	O	Internal PLL lock signal output terminal Not used (open)
8	VSS	—	Ground terminal
9	MCLK1	I	Oscillation clock signal input from the digital audio interface receiver (IC604)
10	VDDI	—	Power supply terminal (+2.6V)
11	VSS	—	Ground terminal
12	MCLK2	O	Oscillation clock signal output terminal Not used (open)
13	MS	I	Master/slave selection signal input terminal "L": slave, "H": master (fixed at "L" in this set)
14	SCKOUT	O	Internal system clock signal output to the digital filter (IC606)
15	LRCKI1	I	L/R sampling clock signal (44.1 kHz) input terminal Not used (open)
16	VDDE	—	Power supply terminal (+3.3V)
17	BCKI1	I	Bit clock signal (2.8224 MHz) input terminal Not used (open)
18	SDI1	I	Audio serial data input from the D/A, A/D converter (IC605)
19	LRCKO	O	L/R sampling clock signal (44.1 kHz) output to the D/A, A/D converter (IC605) and digital filter (IC606)
20	BCKO	O	Bit clock signal (2.8224 MHz) output to the D/A, A/D converter (IC605) and digital filter (IC606)
21	VSS	—	Ground terminal
22	KFSIO	I	Audio clock signal input from the digital audio interface receiver (IC604)
23 to 25	SDO1 to SDO3	O	Audio serial data output to the A/D, D/A converter (IC604)
26	SDO4	O	Audio serial data output to the digital filter (IC606)
27	SPDIF	O	S/PIDF signal output terminal Not used (open)
28	LRCKI2	I	L/R sampling clock signal (44.1 kHz) input from the digital audio interface receiver (IC604)
29	BCKI2	I	Bit clock signal (2.8224 MHz) input from the digital audio interface receiver (IC604)
30	SDI2	I	Audio serial data input from the digital audio interface receiver (IC604)
31	VSS	—	Ground terminal
32	HACN	O	Acknowledge signal output to the system controller (IC501)
33	HDIN	I	Write data input from the system controller (IC501)
34	HCLK	I	Clock signal input from the system controller (IC501)
35	HDOUT	O	Read data output to the system controller (IC501)
36	HCS	I	Chip select signal input from the system controller (IC501)
37	SDCLK	O	Clock signal output terminal Not used (open)
38	CLKEN	O	Clock enable signal output terminal Not used (open)
39	RAS	O	Row address strobe signal input terminal Not used (open)
40	VDDI	—	Power supply terminal (+2.6V)
41	VSS	—	Ground terminal
42	CAS	O	Column address strobe signal output terminal Not used (open)
43	DQM	O	Output terminal of data input/output mask Not used (open)
44	CS0	O	Chip select signal output to the S-RAM (IC602)
45	WE0	O	Write enable signal output to the S-RAM (IC602)
46	VDDE	—	Power supply terminal (+3.3V)
47	WMD1	I	S-RAM wait mode setting terminal Fixed at "H" in this set

Pin No.	Pin Name	I/O	Description
48	VSS	—	Ground terminal
49	WMD0	I	S-RAM wait mode setting terminal Fixed at “L” in this set
50	PAGE2	O	Page selection signal output terminal Not used (open)
51	VSS	—	Ground terminal
52, 53	PAGE1, PAGE0	O	Page selection signal output terminal Not used (open)
54	BOOT	I	Boot mode control signal output terminal Not used (fixed at “L”)
55	BTACT	I	Boot mode state display signal output terminal Not used (open)
56	BST	I	Boot trap signal input from the M61512FP (IC607)
57	MOD1	I	PLL input frequency select terminal “L”: 384fs, “H”: 256fs (fixed at “H” in this set)
58	MOD0	I	Mode setting terminal “L”: single chip mode, “H”: use prohibition (fixed at “L” in this set)
59	EXLOCK	I	PLL lock error and data error flag input from the digital audio interface receiver (IC604)
60	VDDI	—	Power supply terminal (+2.6V)
61	VSS	—	Ground terminal
62, 63	A17, A16	O	Address signal output terminal Not used (open)
64 to 66	A15 to A13	O	Address signal output to the S-RAM (IC602)
67	GP10	O	L/R sampling clock signal (44.1 kHz) output to the D/A, A/D converter (IC605) and digital filter (IC606)
68	DECODE	O	Decode signal output to the system controller (IC501)
69	AUDIO	I	Bit 1 input terminal of channel status from the digital audio interface receiver (IC604)
70	VDDI	—	Power supply terminal (+2.6V)
71	VSS	—	Ground terminal
72 to 75	D15 to D12	I/O	Two-way data bus with the S-RAM (IC602)
76	VDDE	—	Power supply terminal (+3.3V)
77 to 80	D11 to D8	I/O	Two-way data bus with the S-RAM (IC602)
81	VSS	—	Ground terminal
82 to 85	A9, A12 to A10	O	Address signal output to the S-RAM (IC602)
86	TDO	O	Simple emulation data output terminal Not used (open)
87	TMS	I	Simple emulation data input start/end detection signal input terminal Not used (open)
88	XTRST	I	Simple emulation asychronous break input terminal Not used (open)
89	TCK	I	Simple emulation clock signal input terminal Not used (open)
90	TDI	I	Simple emulation data input terminal Not used (open)
91	VSS	—	Ground terminal
92 to 97	A8 to A3	O	Address signal output to the S-RAM (IC602)
98, 99	D7, D6	I/O	Two-way data bus with the S-RAM (IC602)
100	VDDI	—	Power supply terminal (+2.6V)
101	VSS	—	Ground terminal
102 to 105	D5 to D2	I/O	Two-way data bus with the S-RAM (IC602)
106	VDDE	—	Power supply terminal (+3.3V)
107, 108	D1, D0	I/O	Two-way data bus with the S-RAM (IC602)
109, 110	A2, A1	O	Address signal output to the S-RAM (IC602)
111	VSS	—	Ground terminal
112	A0	O	Address signal output to the S-RAM (IC602)
113	$\overline{\text{PM}}$	I	PLL reset signal input from the M61512FP (IC607) “L”: reset
114, 115	SDI3, SDI4	I	Audio serial data input terminal Not used (fixed at “L”)
116	SYNC	I	Synchronous/asychronous selection signal input terminal “L”: Synchronous, “H”: asynchronous (fixed at “H” in this set)
117 to 119	VSS	—	Ground terminal
120	VDDI	—	Power supply terminal (+2.6V)

• **DSP BOARD IC604 LC89056W-E (DIGITAL AUDIO INTERFACE RECEIVER)**

Pin No.	Pin Name	I/O	Description
1	DISEL	I	Selection terminal of data input terminal Fixed at "L" in this set
2	DOUT	O	Digital data output to the optical transceiver (IC609)
3	DIN0	I	Digital data input from the optical receiver (IC952) (for CDP-S3)
4	DIN1	I	Digital data input from the optical receiver (IC951) (for external input)
5	DIN2	I	Digital data input terminal Not used (fixed at "L")
6	DGND	—	Ground terminal (digital system)
7	DVDD	—	Power supply terminal (+3.3V) (digital system)
8	R	I	VCO gain control input terminal
9	VIN	I	VCO free run frequency setting input terminal
10	LPF	O	PLL loop filter setting output terminal
11	AVDD	—	Power supply terminal (+3.3V) (analog system)
12	AGND	—	Ground terminal (analog system)
13	CKOUT	O	Audio clock signal output to the CXD9617R (IC601)
14	BCK	O	Bit clock signal (2.8224 MHz) output to the CXD9617R (IC601)
15	LRCK	O	L/R sampling clock signal (44.1 kHz) output to the CXD9617R (IC601)
16	DATAO	O	Audio serial data output to the CXD9617R (IC601)
17	XSTATE	O	Source clock switching monitor output to the system controller (IC501)
18	DGND	—	Ground terminal (digital system)
19	DVDD	—	Power supply terminal (+3.3V) (digital system)
20	XMCK	O	Oscillation clock signal output to the CXD9617R (IC601)
21	XOUT	O	System clock output terminal (13.5 MHz)
22	XIN	I	System clock input terminal (13.5 MHz)
23	EMPHA	O	Emphasis information of channel status output terminal Not used (open)
24	AUDIO	O	Bit 1 output terminal of channel status to the CXD9617R (IC601)
25	CSFLAG	O	Top 40 bit renovation flag output terminal of channel status Not used (open)
26 to 28	F0 to F2	O	Input frequency calculation result output terminal Not used (open)
29	VF	O	Validity flag output terminal Not used (open)
30	DVDD	—	Power supply terminal (+3.3V) (digital system)
31	DGND	—	Ground terminal (digital system)
32	ERR9P	O	Nine times continuance data transmission error flag output terminal Not used (open)
33	BPSYNC	O	Non-PCM burst and preamble sync signal output terminal Not used (open)
34	ERROR	O	PLL lock error and data error flag output to the system controller (IC501)
35	DO	O	Read data output to the system controller (IC501)
36	DI	I	Write data input from the system controller (IC501)
37	CE	I	Chip enable signal input from the system controller (IC501)
38	CL	I	Clock signal input from the system controller (IC501)
39	XSEL	I	Selection input terminal of vibrator frequency terminal Fixed at "H" in this set
40	MODE0	I	Mode setting input terminal Fixed at "H" in this set
41	MODE1	I	Mode setting input terminal Fixed at "H" in this set
42	DGND	—	Ground terminal (digital system)
43	DVDD	—	Power supply terminal (+3.3V) (digital system)
44	DOSEL0	I	Output data format selection signal input terminal Fixed at "L" in this set
45	DOSEL1	I	Output data format selection signal input terminal Fixed at "L" in this set
46	CKSEL0	I	Output clock selection signal input terminal Fixed at "L" in this set
47	CKSEL1	I	Output clock selection signal input terminal Fixed at "L" in this set
48	XMODE	I	System reset signal input from the M61512FP (IC607)

• **DSP BOARD IC605 AK4527 (A/D, D/A CONVERTER)**

Pin No.	Pin Name	I/O	Description
1	SDOS	I	Audio serial data source selection signal input terminal "L": internal ADC output, "H": DAUX input (fixed at "L" in this set)
2	I2C	I	Serial control mode selection signal input terminal "L": 3-wire serial, "H": I2C bus
3	$\overline{\text{SMUTE}}$	I	Soft muting on/off signal input from the system controller (IC501) "L": muting on
4	BICK	I	Bit clock signal (2.8224 MHz) input from the CXD9617R (IC601)
5	LRCK	I	L/R sampling clock (44.1 kHz) signal input from the CXD9617R (IC601)
6 to 8	SDTI1 to SDIT3	I	Audio serial data input from the CXD9617R (IC601)
9	SDTO	O	Audio serial data output to the CXD9617R (IC601)
10	DAUX	I	Audio serial data input terminal Not used (fixed at "L")
11	DFS	I	Double speed sampling mode signal input terminal "L": normal speed, "H": double speed (fixed at "L" in this set)
12	DEM1	I	De-emphasis signal input terminal Fixed at "L" in this set
13	DEM0	I	De-emphasis signal input terminal Fixed at "H" in this set
14	TVDD	—	Power supply terminal (+5V) (for output buffer)
15	DVDD	—	Power supply terminal (+5V) (digital system)
16	DVSS	—	Ground terminal (digital system)
17	$\overline{\text{PDN}}$	I	Power down and reset signal input from the M61512FP (IC607) "L": power down and reset
18 to 20	ICKS2 to ICKS0	I	Input clock signal selection terminal Fixed at "L" in this set
21, 22	CAD1, CAD0	I	Chip address signal input terminal Not used (fixed at "L")
23	LOUT3	O	Analog signal output for center to the M61512FP (IC607)
24	ROUT3	O	Analog signal output for sub woofer to the M61512FP (IC607)
25	LOUT2	O	Analog signal output for surround L-ch to the M61512FP (IC607)
26	ROUT2	O	Analog signal output for surround R-ch to the M61512FP (IC607)
27	LOUT1	O	Analog signal output for front L-ch to the M61512FP (IC607)
28	ROUT1	O	Analog signal output for front R-ch to the M61512FP (IC607)
29	LIN–	I	L-ch analog signal negative input from the M61512FP (IC607)
30	LIN+	I	L-ch analog signal positive input from the M61512FP (IC607)
31	RIN–	I	R-ch analog signal negative input from the M61512FP (IC607)
32	RIN+	I	R-ch analog signal positive input from the M61512FP (IC607)
33	DZF2	O	Zero input detection terminal Not used (open)
34	VCOM	O	Common voltage output terminal Large external capacitor is used to reduce power supply noise
35	VREFH	I	Reference voltage (+5V) input terminal
36	AVDD	—	Power supply terminal (+5V) (analog system)
37	AVSS	—	Ground terminal (analog system)
38	DZF1	O	Zero input detection terminal Not used (open)
39	MCLK	I	Master clock signal input from the CXD9617R (IC601)
40	P/$\overline{\text{S}}$	I	Parallel/serial selection signal input terminal "L": serial control mode, "H": parallel control mode (fixed at "H" in this set)
41	DIF0	I	Audio data interface format terminal Fixed at "L" in this set
42	DIF1	I	Audio data interface format terminal Fixed at "H" in this set
43, 44	LOOP0, LOOP1	I	Loop back mode setting terminal Fixed at "L" in this set

• **PANEL BOARD IC601 MB90M407PF-G-102-BND (DISPLAY CONTROLLER)**

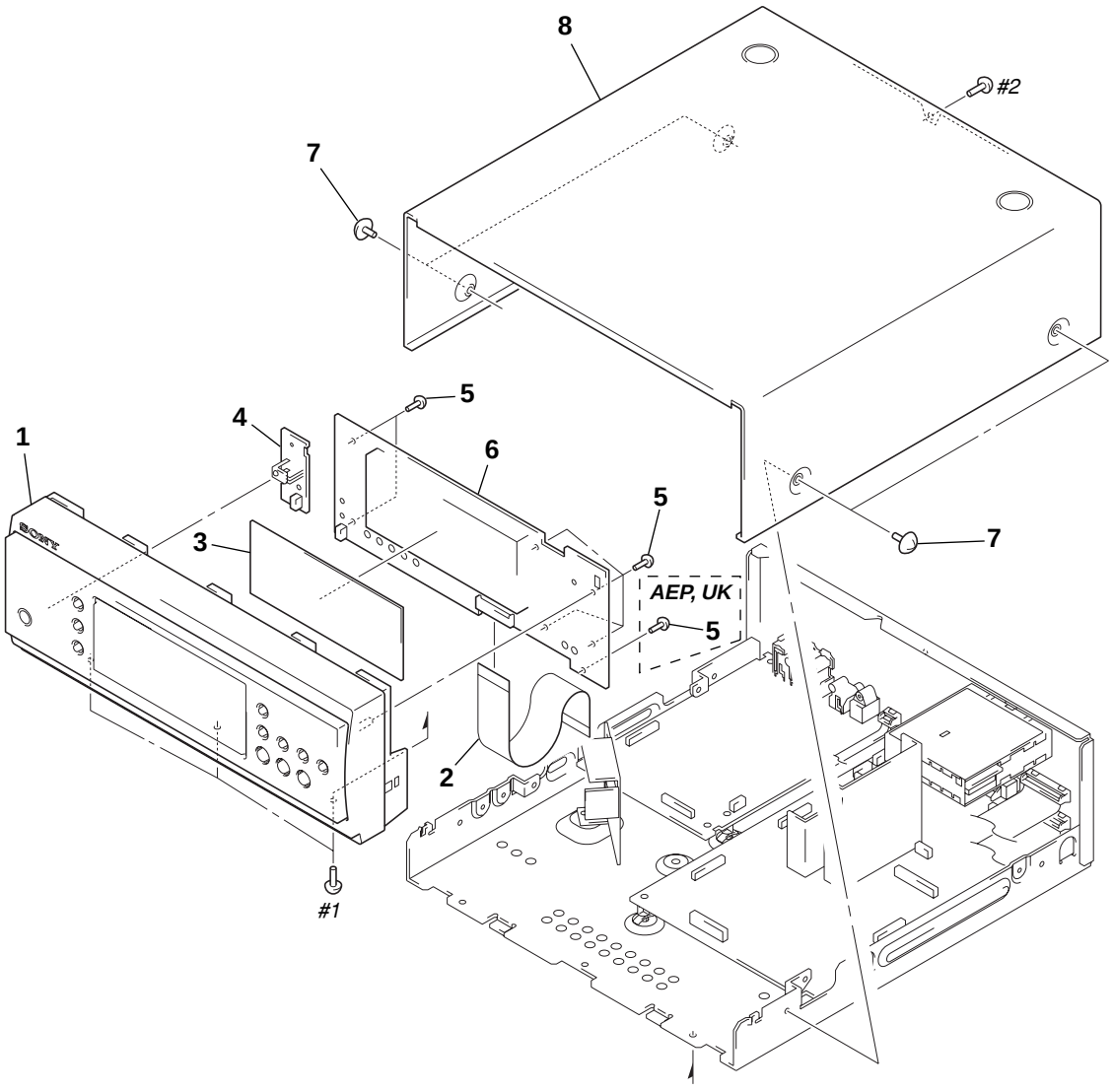
Pin No.	Pin Name	I/O	Description
1 to 6	G6 to G1	O	Grid drive signal output to the fluorescent indicator tube (FL601)
7 to 10	A1 to A4	O	Segment drive signal output to the fluorescent indicator tube (FL601)
11	VSS FOR IO	—	Ground terminal (for I/O)
12 to 22	A5 to A15	O	Segment drive signal output to the fluorescent indicator tube (FL601)
23	VDD FOR VFT	—	Power supply terminal (+3.3V) (for VFT)
24 to 41	A16 to A33	O	Segment drive signal output to the fluorescent indicator tube (FL601)
42	VSS FOR IO	—	Ground terminal (for I/O)
43 to 47	A34 toA38	O	Segment drive signal output to the fluorescent indicator tube (FL601)
48	VKK FOR VFT	—	Power supply terminal (–28V) (for VFT)
49	MODE0	—	Chip mode selection terminal Not used (fixed at "H")
50	MODE1	—	Chip mode selection terminal Not used (fixed at "H")
51	MODE2	—	Chip mode selection terminal Not used (fixed at "L")
52	JOG2B	I	Jog dial pulse input from the rotary encoder (for sound) in the TA-S7AV (B phase input)
53	JOG2A	I	Jog dial pulse input from the rotary encoder (for sound) in the TA-S7AV (A phase input)
54	JOG1B	I	Jog dial pulse input from the rotary encoder (for function) in the TA-S7AV (B phase input)
55	JOG1A	I	Jog dial pulse input from the rotary encoder (for function) in the TA-S7AV (A phase input)
56	VOLA	I	Jog dial pulse input from the rotary encoder (for volume) in the TA-S7AV (A phase input)
57	VOLB	I	Jog dial pulse input from the rotary encoder (for volume) in the TA-S7AV (B phase input)
58, 59	—	—	Not used (open)
60	I2C DATA	I/O	Communication data bus with the system controller (IC501) and CDP-S3
61	I2C CLK	I/O	Communication data reading clock signal input or transfer clock signal output with the system controller (IC501) and CDP-S3
62	AVCC FOR ANALOG	—	Power supply terminal (+3.3V) (for analog)
63	AVSS FOR ANALOG	—	Ground terminal (for analog)
64	KEY0	I	Key input terminal (A/D input) CLOCK/TIMER, TIMER SELECT, TUNER/BAND, TUNING +/–, ENTER, PRESET +/–, TUNER MEMORY, STEREO/MONO, PTY (S602 to S612) keys input PTY (S612) key: Used for the AEP and UK models only
65	KEY1	I	Key input terminal for TA-S7AV (A/D input)
66 to 76	—	—	Not used (open)
77	$\overline{\text{RESET}}$	I	Reset signal input from the system controller (IC501) "L": reset
78 to 80	—	—	Not used (open)
81	VSS FOR CPU	—	Ground terminal (for CPU)
82	XIN	I	System clock input terminal (4 MHz)
83	XOUT	O	System clock output terminal (4 MHz)
84	VCC FOR CPU	—	Power supply terminal (+3.3V)
85 to 91	—	—	Not used (open)
92 to 94	G12	O	Grid drive signal output to the fluorescent indicator tube (FL601)
95 to 98	G11 to G8	O	Grid drive signal output to the fluorescent indicator tube (FL601)
99, 100	G7	O	Grid drive signal output to the fluorescent indicator tube (FL601)

SECTION 6
EXPLODED VIEWS

NOTE:

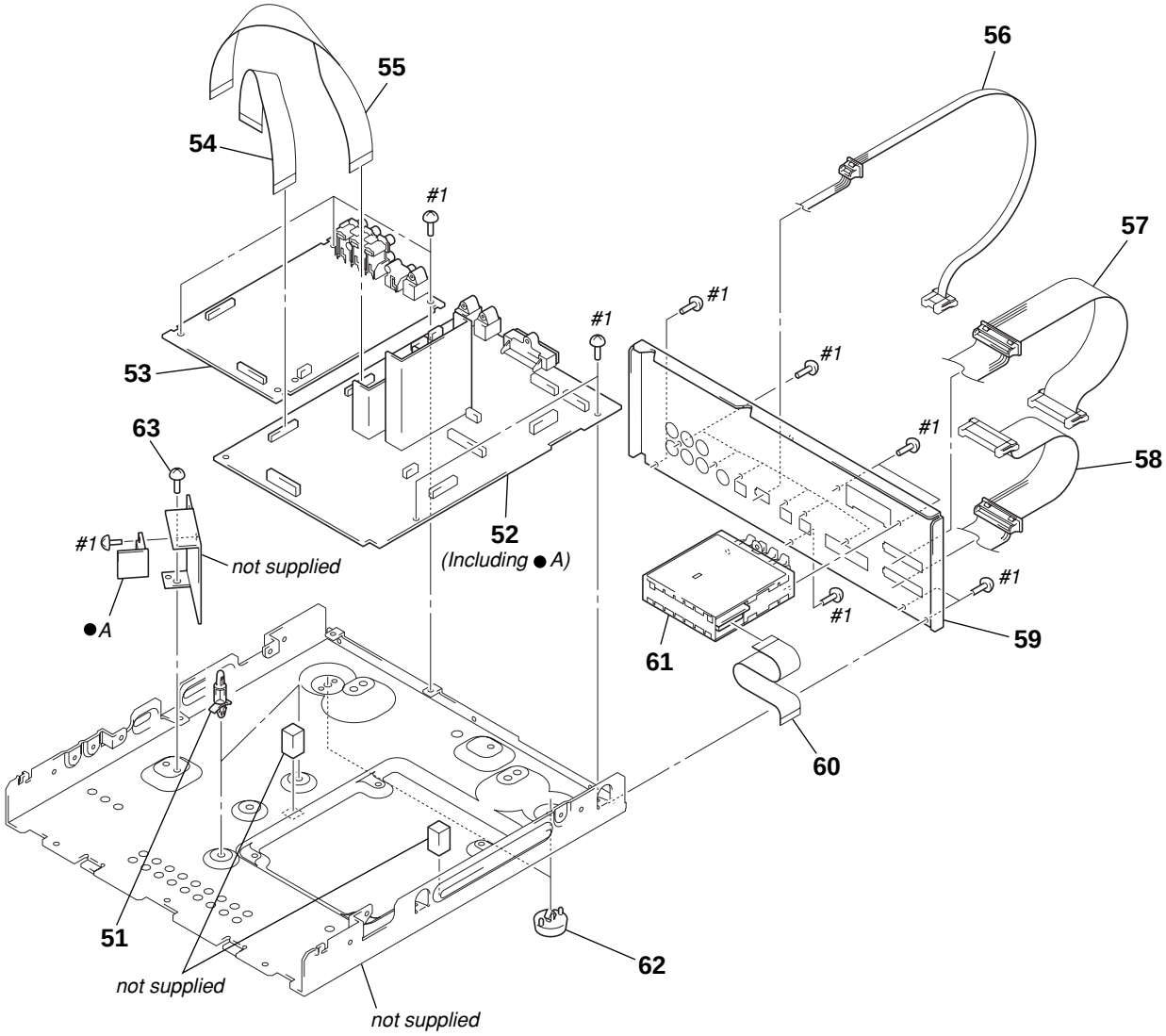
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts
  Example:
  KNOB, BALANCE (WHITE) . . . (RED)
  ↑ ↑
  Parts Color Cabinet's Color
- Abbreviation
  AUS : Australian model
  KR : Korean model
  MX : Mexican model
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.

6-1. COVER, FRONT PANEL SECTION



Ref. No.	Part No.	Description	Remark
1	X-4953-451-1	PANEL ASSY (ST), FRONT (AEP, UK)	
1	X-4953-452-1	PANEL ASSY (ST), FRONT (KR, MX, AUS)	
2	1-773-114-11	WIRE (FLAT TYPE) (19 CORE)	
3	4-232-351-01	FILTER (FL)	
4	1-680-697-11	SIRCS BOARD	
5	4-951-620-01	SCREW (2.6X8), +BVTP	
6	A-4476-267-A	PANEL BOARD, COMPLETE (AEP, UK)	
6	A-4476-269-A	PANEL BOARD, COMPLETE (KR, MX, AUS)	
7	3-363-099-21	SCREW (CASE 3 TP2)	
8	4-233-134-31	COVER	
#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	
#2	7-685-871-01	SCREW +BVTT 3X6 (S)	

6-2. CHASSIS SECTION



Ref. No.	Part No.	Description	Remark
* 51	4-924-098-01	HOLDER, PC BOARD	
52	A-2007-939-A	MAIN BOARD, COMPLETE (MX)	
52	A-4476-193-A	MAIN BOARD, COMPLETE (AEP, UK)	
52	A-4476-203-A	MAIN BOARD, COMPLETE (KR, AUS)	
53	A-4476-199-A	DSP BOARD, COMPLETE (AEP, UK)	
53	A-4476-646-A	DSP BOARD, COMPLETE (MX)	
53	A-4726-352-A	DSP BOARD, COMPLETE (KR, AUS)	
54	1-757-599-11	WIRE (FLAT TYPE) (21 CORE)	
55	1-757-600-11	WIRE (FLAT TYPE) (23 CORE)	
56	1-757-629-11	CORD (WITH CONNECTOR) 5P	
57	1-757-631-11	CORD (WITH CONNECTOR) 20P	
58	1-757-630-11	CORD (WITH CONNECTOR) 19P	

Ref. No.	Part No.	Description	Remark
59	4-232-327-01	PANEL (ST), BACK (AEP, UK)	
59	4-232-327-11	PANEL (ST), BACK (AUS)	
59	4-232-327-41	PANEL (ST), BACK (MX)	
59	4-232-327-91	PANEL (ST), BACK (KR)	
60	1-769-940-11	WIRE (FLAT TYPE) (11 CORE) (KR, MX, AUS)	
60	1-773-004-11	WIRE (FLAT TYPE) (15 CORE) (AEP, UK)	
61	1-693-529-11	TUNER PACK (FM/AM) (AEP, UK)	
61	1-693-531-71	TUNER PACK (FM/AM) (MX, AUS)	
61	1-693-538-11	TUNER PACK (FM/AM) (KR)	
62	4-965-822-01	FOOT	
63	3-970-608-01	SUMITITE (B3), +BV	
#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	

SECTION 7
ELECTRICAL PARTS LIST

DSP

NOTE:
- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL: Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F: nonflammable
- Abbreviation
  AUS : Australian model
  KR : Korean model
  MX : Mexican model
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u: μ, for example:
  uA. . : μA. . uPA. . : μPA. .
  uPB. . : μPB. . uPC. . : μPC. .
  uPD. . : μPD. .
- CAPACITORS
  uF: μF
- COILS
  uH: μH

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description			Remark
	A-4476-199-A	DSP BOARD, COMPLETE (AEP, UK)			
	A-4476-646-A	DSP BOARD, COMPLETE (MX)			
	A-4726-352-A	DSP BOARD, COMPLETE (KR, AUS)			
		**********			
		< CAPACITOR >			
C601	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C602	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C603	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C604	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C606	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C607	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C608	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C609	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C610	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C611	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C612	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C613	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C614	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C615	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C616	1-126-934-11	ELECT	220uF	20%	10V
C617	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C618	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C619	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C620	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C621	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C622	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C623	1-126-934-11	ELECT	220uF	20%	10V
C624	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C625	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C626	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C627	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C628	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C629	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C630	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C631	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C632	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C633	1-126-934-11	ELECT	220uF	20%	10V
C634	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C635	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C636	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C637	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C638	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C639	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C640	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C641	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C642	1-162-971-11	CERAMIC CHIP	0.001uF	10%	50V
C643	1-162-971-11	CERAMIC CHIP	0.001uF	10%	50V
C644	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C645	1-126-934-11	ELECT	220uF	20%	10V
C646	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C647	1-126-934-11	ELECT	220uF	20%	10V
C648	1-126-934-11	ELECT	220uF	20%	10V
C649	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C650	1-126-934-11	ELECT	220uF	20%	10V
C651	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C652	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C653	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C654	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C655	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C656	1-126-934-11	ELECT	220uF	20%	10V
C657	1-162-971-11	CERAMIC CHIP	0.001uF	10%	50V
C658	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C659	1-126-934-11	ELECT	220uF	20%	10V
C660	1-126-934-11	ELECT	220uF	20%	10V
C661	1-126-934-11	ELECT	220uF	20%	10V
C662	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C664	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C665	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C666	1-126-934-11	ELECT	220uF	20%	10V
C667	1-126-964-11	ELECT	10uF	20%	50V
C668	1-126-964-11	ELECT	10uF	20%	50V
C669	1-126-964-11	ELECT	10uF	20%	50V
C670	1-126-964-11	ELECT	10uF	20%	50V
C671	1-126-964-11	ELECT	10uF	20%	50V
C672	1-126-964-11	ELECT	10uF	20%	50V
C673	1-126-964-11	ELECT	10uF	20%	50V
C674	1-126-964-11	ELECT	10uF	20%	50V
C675	1-126-193-11	ELECT CHIP	1uF	20%	50V
C676	1-126-193-11	ELECT CHIP	1uF	20%	50V
C677	1-126-193-11	ELECT CHIP	1uF	20%	50V
C678	1-126-964-11	ELECT	10uF	20%	50V
C679	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C680	1-126-964-11	ELECT	10uF	20%	50V
C681	1-126-193-11	ELECT CHIP	1uF	20%	50V
C682	1-126-193-11	ELECT CHIP	1uF	20%	50V
C683	1-126-193-11	ELECT CHIP	1uF	20%	50V

Ref. No.	Part No.	Description			Remark
C684	1-126-964-11	ELECT	10uF	20%	50V
C685	1-126-964-11	ELECT	10uF	20%	50V
C686	1-126-933-11	ELECT	100uF	20%	16V
C687	1-126-933-11	ELECT	100uF	20%	16V
C689	1-126-933-11	ELECT	100uF	20%	16V
C690	1-126-934-11	ELECT	220uF	20%	10V
C691	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C692	1-136-165-00	MYLAR	0.1uF	5%	50V
C693	1-136-165-00	MYLAR	0.1uF	5%	50V
C694	1-136-165-00	MYLAR	0.1uF	5%	50V
C695	1-136-165-00	MYLAR	0.1uF	5%	50V
C699	1-126-964-11	ELECT	10uF	20%	50V
C700	1-126-964-11	ELECT	10uF	20%	50V
C701	1-126-193-11	ELECT CHIP	1uF	20%	50V
C702	1-126-960-11	ELECT	1uF	20%	50V
C703	1-126-960-11	ELECT	1uF	20%	50V
C704	1-126-961-11	ELECT	2.2uF	20%	50V
C705	1-126-964-11	ELECT	10uF	20%	50V
C706	1-126-964-11	ELECT	10uF	20%	50V
C707	1-126-964-11	ELECT	10uF	20%	50V
C708	1-126-964-11	ELECT	10uF	20%	50V
C709	1-126-964-11	ELECT	10uF	20%	50V
C710	1-126-964-11	ELECT	10uF	20%	50V
C711	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C712	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C713	1-162-957-11	CERAMIC CHIP	220PF	5%	50V
C714	1-162-957-11	CERAMIC CHIP	220PF	5%	50V
C715	1-162-957-11	CERAMIC CHIP	220PF	5%	50V
C716	1-162-957-11	CERAMIC CHIP	220PF	5%	50V
C717	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C719	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C720	1-162-957-11	CERAMIC CHIP	220PF	5%	50V
C721	1-126-934-11	ELECT	220uF	20%	10V
C722	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C723	1-126-964-11	ELECT	10uF	20%	50V
C724	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C725	1-126-964-11	ELECT	10uF	20%	50V
C726	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C727	1-126-964-11	ELECT	10uF	20%	50V
C728	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C729	1-126-964-11	ELECT	10uF	20%	50V
C730	1-126-964-11	ELECT	10uF	20%	50V
C731	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C732	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C733	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C735	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C736	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C738	1-164-357-11	CERAMIC CHIP	0.001uF	5%	50V
C739	1-164-357-11	CERAMIC CHIP	0.001uF	5%	50V
C740	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C741	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C742	1-164-357-11	CERAMIC CHIP	0.001uF	5%	50V
		< CONNECTOR >			
CN601	1-506-469-11	PIN, CONNECTOR 4P			
CN602	1-779-289-11	CONNECTOR, FFC (LIF (NON-ZIF)) 21P			
CN603	1-779-291-11	CONNECTOR, FFC (LIF (NON-ZIF)) 23P			

Ref. No.	Part No.	Description			Remark
		< DIODE/RESISTOR >			
D601	8-719-158-02	DIODE RD3.9SB2			
D604	8-719-988-61	DIODE 1SS355TE-17			
D605	8-719-988-61	DIODE 1SS355TE-17			
D606	1-216-864-11	METAL CHIP	0	5%	1/16W
D607	8-719-058-24	DIODE RB501V-40TE-17 (E, AUS)			
D608	8-719-058-24	DIODE RB501V-40TE-17 (E, AUS)			
D609	8-719-058-24	DIODE RB501V-40TE-17 (E, AUS)			
D610	8-719-058-24	DIODE RB501V-40TE-17 (E, AUS)			
		< GROUND TERMINAL >			
* EP602	1-537-738-21	TERMINAL, EARTH			
* EP603	1-537-738-21	TERMINAL, EARTH			
* EP604	1-537-738-21	TERMINAL, EARTH			
		< FERRITE BEAD/RESISTOR >			
FB601	1-216-864-11	METAL CHIP	0	5%	1/16W
FB602	1-216-864-11	METAL CHIP	0	5%	1/16W
FB603	1-500-445-21	FERRITE	0uH		
FB604	1-216-864-11	METAL CHIP	0	5%	1/16W
FB605	1-216-864-11	METAL CHIP	0	5%	1/16W
FB606	1-216-805-11	METAL CHIP	47	5%	1/16W
FB607	1-500-445-21	FERRITE	0uH		
FB608	1-500-445-21	FERRITE	0uH		
		< IC >			
IC601	8-759-698-76	IC CXD9617R			
IC602	8-759-827-81	IC IS61LV6416-15T (T&R)			
IC603	8-759-238-47	IC TC74HCT7007AF (EL)			
IC604	8-759-825-15	IC LC89056W-E			
IC605	8-759-657-47	IC AK4527			
IC606	8-759-825-13	IC PCM1748E/2K			
IC607	8-749-018-85	IC M61512FP			
IC608	8-759-549-25	IC SN74LVU04APWR			
IC609	8-749-923-04	IC TOTX178A (OPTICAL OUT)			
IC610	8-759-835-63	IC NJM2391DL1-26-TE1			
		< JACK >			
J601	1-774-411-11	JACK, PIN 6P (VIDEO (AUDIO) IN, MD IN/OUT)			
J602	1-774-785-11	JACK, PIN 1P (SUB WOOFER OUT)			
		< JUNPER RESISTOR >			
JR601	1-216-864-11	METAL CHIP	0	5%	1/16W
JR603	1-216-864-11	METAL CHIP	0	5%	1/16W
JR620	1-216-864-11	METAL CHIP	0	5%	1/16W
JR621	1-216-864-11	METAL CHIP	0	5%	1/16W
JR622	1-216-864-11	METAL CHIP	0	5%	1/16W
		< TRANSISTOR >			
Q601	8-729-801-93	TRANSISTOR	2SD1387		
Q602	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q603	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q604	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q605	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q606	8-729-141-73	TRANSISTOR	2SC3624A-T1L15L16		
Q607	8-729-141-73	TRANSISTOR	2SC3624A-T1L15L16		
Q608	8-729-141-73	TRANSISTOR	2SC3624A-T1L15L16		
Q609	8-729-141-73	TRANSISTOR	2SC3624A-T1L15L16		

DSP

Ref. No.	Part No.	Description			Remark
Q610	8-729-141-73	TRANSISTOR	2SC3624A-T1L15L16		
Q611	8-729-141-73	TRANSISTOR	2SC3624A-T1L15L16		
Q612	8-729-113-69	TRANSISTOR	FN1F4M-M32		
Q613	8-729-113-14	TRANSISTOR	FA1A4M-T1L33		
		< RESISTOR >			
R601	1-216-809-11	METAL CHIP	100	5%	1/16W
R602	1-216-821-11	METAL CHIP	1K	5%	1/16W
R603	1-216-809-11	METAL CHIP	100	5%	1/16W
R604	1-216-809-11	METAL CHIP	100	5%	1/16W
R605	1-216-809-11	METAL CHIP	100	5%	1/16W
R606	1-216-809-11	METAL CHIP	100	5%	1/16W
R607	1-216-809-11	METAL CHIP	100	5%	1/16W
R608	1-216-809-11	METAL CHIP	100	5%	1/16W
R610	1-216-809-11	METAL CHIP	100	5%	1/16W
R611	1-216-809-11	METAL CHIP	100	5%	1/16W
R612	1-216-809-11	METAL CHIP	100	5%	1/16W
R613	1-216-809-11	METAL CHIP	100	5%	1/16W
R614	1-216-809-11	METAL CHIP	100	5%	1/16W
R615	1-216-809-11	METAL CHIP	100	5%	1/16W
R616	1-216-809-11	METAL CHIP	100	5%	1/16W
R617	1-216-809-11	METAL CHIP	100	5%	1/16W
R618	1-216-809-11	METAL CHIP	100	5%	1/16W
R619	1-216-809-11	METAL CHIP	100	5%	1/16W
R620	1-216-809-11	METAL CHIP	100	5%	1/16W
R621	1-216-809-11	METAL CHIP	100	5%	1/16W
R623	1-216-833-11	METAL CHIP	10K	5%	1/16W
R628	1-216-809-11	METAL CHIP	100	5%	1/16W
R629	1-216-809-11	METAL CHIP	100	5%	1/16W
R630	1-216-809-11	METAL CHIP	100	5%	1/16W
R631	1-216-809-11	METAL CHIP	100	5%	1/16W
R632	1-216-809-11	METAL CHIP	100	5%	1/16W
R633	1-216-809-11	METAL CHIP	100	5%	1/16W
R634	1-216-809-11	METAL CHIP	100	5%	1/16W
R635	1-216-809-11	METAL CHIP	100	5%	1/16W
R636	1-216-809-11	METAL CHIP	100	5%	1/16W
R637	1-216-809-11	METAL CHIP	100	5%	1/16W
R638	1-216-809-11	METAL CHIP	100	5%	1/16W
R639	1-216-809-11	METAL CHIP	100	5%	1/16W
R640	1-216-809-11	METAL CHIP	100	5%	1/16W
R641	1-216-809-11	METAL CHIP	100	5%	1/16W
R642	1-216-809-11	METAL CHIP	100	5%	1/16W
R643	1-216-815-11	METAL CHIP	330	5%	1/16W
R644	1-216-815-11	METAL CHIP	330	5%	1/16W
R645	1-216-815-11	METAL CHIP	330	5%	1/16W
R646	1-216-815-11	METAL CHIP	330	5%	1/16W
R647	1-216-815-11	METAL CHIP	330	5%	1/16W
R648	1-216-815-11	METAL CHIP	330	5%	1/16W
R649	1-216-817-11	METAL CHIP	470	5%	1/16W
R650	1-216-817-11	METAL CHIP	470	5%	1/16W
R651	1-216-817-11	METAL CHIP	470	5%	1/16W
R652	1-216-817-11	METAL CHIP	470	5%	1/16W
R653	1-216-833-11	METAL CHIP	10K	5%	1/16W
R654	1-216-833-11	METAL CHIP	10K	5%	1/16W
R655	1-216-833-11	METAL CHIP	10K	5%	1/16W
R656	1-216-833-11	METAL CHIP	10K	5%	1/16W
R657	1-216-809-11	METAL CHIP	100	5%	1/16W

Ref. No.	Part No.	Description			Remark
R658	1-216-809-11	METAL CHIP	100	5%	1/16W
R659	1-216-809-11	METAL CHIP	100	5%	1/16W
R660	1-216-815-11	METAL CHIP	330	5%	1/16W
R661	1-216-815-11	METAL CHIP	330	5%	1/16W
R662	1-216-809-11	METAL CHIP	100	5%	1/16W
R663	1-216-817-11	METAL CHIP	470	5%	1/16W
R664	1-216-809-11	METAL CHIP	100	5%	1/16W
R665	1-216-809-11	METAL CHIP	100	5%	1/16W
R666	1-216-809-11	METAL CHIP	100	5%	1/16W
R667	1-216-809-11	METAL CHIP	100	5%	1/16W
R668	1-216-809-11	METAL CHIP	100	5%	1/16W
R669	1-216-809-11	METAL CHIP	100	5%	1/16W
R670	1-216-809-11	METAL CHIP	100	5%	1/16W
R671	1-216-809-11	METAL CHIP	100	5%	1/16W
R672	1-216-809-11	METAL CHIP	100	5%	1/16W
R673	1-216-809-11	METAL CHIP	100	5%	1/16W
R674	1-216-809-11	METAL CHIP	100	5%	1/16W
R675	1-216-809-11	METAL CHIP	100	5%	1/16W
R676	1-216-809-11	METAL CHIP	100	5%	1/16W
R677	1-216-830-11	METAL CHIP	5.6K	5%	1/16W
R678	1-216-833-11	METAL CHIP	10K	5%	1/16W
R679	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R680	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R681	1-216-839-11	METAL CHIP	33K	5%	1/16W
R682	1-216-809-11	METAL CHIP	100	5%	1/16W
R683	1-216-809-11	METAL CHIP	100	5%	1/16W
R684	1-216-809-11	METAL CHIP	100	5%	1/16W
R685	1-216-809-11	METAL CHIP	100	5%	1/16W
R686	1-216-809-11	METAL CHIP	100	5%	1/16W
R687	1-216-809-11	METAL CHIP	100	5%	1/16W
R688	1-216-809-11	METAL CHIP	100	5%	1/16W
R689	1-216-821-11	METAL CHIP	1K	5%	1/16W
R690	1-216-857-11	METAL CHIP	1M	5%	1/16W
R691	1-216-864-11	METAL CHIP	0	5%	1/16W
R692	1-216-809-11	METAL CHIP	100	5%	1/16W
R693	1-216-809-11	METAL CHIP	100	5%	1/16W
R694	1-216-809-11	METAL CHIP	100	5%	1/16W
R695	1-216-809-11	METAL CHIP	100	5%	1/16W
R696	1-216-824-11	METAL CHIP	1.8K	5%	1/16W
R697	1-216-824-11	METAL CHIP	1.8K	5%	1/16W
R698	1-216-853-11	METAL CHIP	470K	5%	1/16W
R699	1-216-853-11	METAL CHIP	470K	5%	1/16W
R700	1-216-833-11	METAL CHIP	10K	5%	1/16W
R701	1-216-833-11	METAL CHIP	10K	5%	1/16W
R702	1-216-857-11	METAL CHIP	1M	5%	1/16W
R703	1-216-857-11	METAL CHIP	1M	5%	1/16W
R706	1-216-841-11	METAL CHIP	47K	5%	1/16W
R707	1-216-841-11	METAL CHIP	47K	5%	1/16W
R709	1-216-864-11	METAL CHIP	0	5%	1/16W
R711	1-216-821-11	METAL CHIP	1K	5%	1/16W
R712	1-216-841-11	METAL CHIP	47K	5%	1/16W
R713	1-216-821-11	METAL CHIP	1K	5%	1/16W
R715	1-216-821-11	METAL CHIP	1K	5%	1/16W
R716	1-216-841-11	METAL CHIP	47K	5%	1/16W
R717	1-216-821-11	METAL CHIP	1K	5%	1/16W
R719	1-216-821-11	METAL CHIP	1K	5%	1/16W
R720	1-216-841-11	METAL CHIP	47K	5%	1/16W
R721	1-216-821-11	METAL CHIP	1K	5%	1/16W

Ref. No.	Part No.	Description			Remark
R723	1-216-821-11	METAL CHIP	1K	5%	1/16W
R724	1-216-841-11	METAL CHIP	47K	5%	1/16W
R725	1-216-821-11	METAL CHIP	1K	5%	1/16W
R727	1-216-821-11	METAL CHIP	1K	5%	1/16W
R728	1-216-841-11	METAL CHIP	47K	5%	1/16W
R729	1-216-821-11	METAL CHIP	1K	5%	1/16W
R730	1-216-837-11	METAL CHIP	22K	5%	1/16W
R731	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R733	1-216-821-11	METAL CHIP	1K	5%	1/16W
R734	1-216-821-11	METAL CHIP	1K	5%	1/16W
R735	1-216-821-11	METAL CHIP	1K	5%	1/16W
R738	1-216-821-11	METAL CHIP	1K	5%	1/16W
R739	1-216-835-11	METAL CHIP	15K	5%	1/16W
R742	1-216-835-11	METAL CHIP	15K	5%	1/16W
R743	1-216-833-11	METAL CHIP	10K	5%	1/16W
R746	1-216-833-11	METAL CHIP	10K	5%	1/16W
R747	1-216-845-11	METAL CHIP	100K	5%	1/16W
R748	1-216-845-11	METAL CHIP	100K	5%	1/16W
R749	1-216-834-11	METAL CHIP	12K	5%	1/16W
R750	1-216-834-11	METAL CHIP	12K	5%	1/16W
R751	1-216-841-11	METAL CHIP	47K	5%	1/16W
R752	1-216-841-11	METAL CHIP	47K	5%	1/16W
R754	1-216-809-11	METAL CHIP	100	5%	1/16W
R755	1-216-809-11	METAL CHIP	100	5%	1/16W
R756	1-216-841-11	METAL CHIP	47K	5%	1/16W
R757	1-216-841-11	METAL CHIP	47K	5%	1/16W
R758	1-216-821-11	METAL CHIP	1K	5%	1/16W
R759	1-216-821-11	METAL CHIP	1K	5%	1/16W
R760	1-216-821-11	METAL CHIP	1K	5%	1/16W
R761	1-216-821-11	METAL CHIP	1K	5%	1/16W
R762	1-216-821-11	METAL CHIP	1K	5%	1/16W
R763	1-216-821-11	METAL CHIP	1K	5%	1/16W
R765	1-216-821-11	METAL CHIP	1K	5%	1/16W
R766	1-216-821-11	METAL CHIP	1K	5%	1/16W
R767	1-216-821-11	METAL CHIP	1K	5%	1/16W
R768	1-216-833-11	METAL CHIP	10K	5%	1/16W
R769	1-216-821-11	METAL CHIP	1K	5%	1/16W
R770	1-216-821-11	METAL CHIP	1K	5%	1/16W
R771	1-216-833-11	METAL CHIP	10K	5%	1/16W
R772	1-216-821-11	METAL CHIP	1K	5%	1/16W
R773	1-216-821-11	METAL CHIP	1K	5%	1/16W
R774	1-216-821-11	METAL CHIP	1K	5%	1/16W
R775	1-216-833-11	METAL CHIP	10K	5%	1/16W
R776	1-216-833-11	METAL CHIP	10K	5%	1/16W
R777	1-216-833-11	METAL CHIP	10K	5%	1/16W
R778	1-216-821-11	METAL CHIP	1K	5%	1/16W (E, AUS)
R779	1-216-841-11	METAL CHIP	47K	5%	1/16W
R780	1-216-841-11	METAL CHIP	47K	5%	1/16W
R781	1-216-841-11	METAL CHIP	47K	5%	1/16W
		< VIBRATOR >			
X601	1-579-993-21	VIBRATOR, CERAMIC (13.5MHz)			

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Ref. No.	Part No.	Description			Remark
	A-2007-939-A	MAIN BOARD, COMPLETE (MX)			
	A-4476-193-A	MAIN BOARD, COMPLETE (AEP, UK)			
	A-4476-203-A	MAIN BOARD, COMPLETE (KR, AUS)			
		**********			
	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S			
		< CAPACITOR >			
C501	1-162-205-31	CERAMIC	18PF	5%	50V
C502	1-162-203-31	CERAMIC	15PF	5%	50V
C503	1-164-159-11	CERAMIC	0.1uF		50V
C504	1-164-159-11	CERAMIC	0.1uF		50V
C505	1-126-916-11	ELECT	1000uF	20%	6.3V
C506	1-126-963-11	ELECT	4.7uF	20%	50V
C508	1-126-964-11	ELECT	10uF	20%	50V
C509	1-164-159-11	CERAMIC	0.1uF		50V
C510	1-126-963-11	ELECT	4.7uF	20%	50V
C519	1-162-282-31	CERAMIC	100PF	10%	50V
C520	1-162-282-31	CERAMIC	100PF	10%	50V
C551	1-126-964-11	ELECT	10uF	20%	50V
C552	1-164-159-11	CERAMIC	0.1uF		50V
C553	1-164-159-11	CERAMIC	0.1uF		50V
C561	1-164-159-11	CERAMIC	0.1uF		50V
C562	1-162-306-11	CERAMIC	0.01uF	30%	16V
C902	1-126-935-11	ELECT	470uF	20%	10V
C903	1-126-964-11	ELECT	10uF	20%	50V
C904	1-126-936-11	ELECT	3300uF	20%	16V
C905	1-126-935-11	ELECT	470uF	20%	16V
C906	1-164-159-11	CERAMIC	0.1uF		50V
C907	1-126-934-11	ELECT	220uF	20%	10V
C909	1-126-968-11	ELECT	100uF	20%	50V
C910	1-126-964-11	ELECT	10uF	20%	50V
C915	1-126-948-11	ELECT	100uF	20%	35V
C916	1-162-306-11	CERAMIC	0.01uF	30%	16V
C918	1-126-935-11	ELECT	470uF	20%	10V
C927	1-164-159-11	CERAMIC	0.1uF		50V
C928	1-164-159-11	CERAMIC	0.1uF		50V
C937	1-164-159-11	CERAMIC	0.1uF		50V
C941	1-126-964-11	ELECT	10uF	20%	50V
C942	1-126-935-11	ELECT	470uF	20%	6.3V
C943	1-164-159-11	CERAMIC	0.1uF		50V
C952	1-128-548-11	ELECT	4700uF	20%	25V
C953	1-164-159-11	CERAMIC	0.1uF		50V
C955	1-162-306-11	CERAMIC	0.01uF	30%	16V
C956	1-126-964-11	ELECT	10uF	20%	50V
C957	1-162-306-11	CERAMIC	0.01uF	30%	16V
C961	1-164-159-11	CERAMIC	0.1uF		50V
C962	1-126-964-11	ELECT	10uF	20%	50V
C964	1-162-306-11	CERAMIC	0.01uF	30%	16V
C966	1-162-306-11	CERAMIC	0.01uF	30%	16V
C968	1-162-306-11	CERAMIC	0.01uF	30%	16V
C970	1-162-306-11	CERAMIC	0.01uF	30%	16V
C971	1-162-306-11	CERAMIC	0.01uF	30%	16V
C972	1-164-159-11	CERAMIC	0.1uF		50V
C977	1-126-964-11	ELECT	10uF	20%	50V
C978	1-126-964-11	ELECT	10uF	20%	50V
C991	1-164-159-11	CERAMIC	0.1uF		50V
C992	1-164-159-11	CERAMIC	0.1uF		50V

MAIN

Ref. No.	Part No.	Description	Remark
		< CONNECTOR >	
CN502	1-784-780-11	CONNECTOR, FFC 19P	
* CN505	1-569-624-11	SOCKET, CONNECTOR 17P	
		(SYSTEM CONTROL 3)	
CN506	1-568-830-11	CONNECTOR, FFC 11P (E, AUS)	
CN506	1-784-776-11	CONNECTOR, FFC 15P (AEP, UK)	
CN508	1-779-291-11	CONNECTOR, FFC (LIF (NON-ZIF)) 23P	
CN509	1-779-289-11	CONNECTOR, FFC (LIF (NON-ZIF)) 21P	
CN510	1-794-569-11	PIN, CONNECTOR 5P	
CN5031	1-794-569-11	PIN, CONNECTOR 5P	
CN5032	1-691-907-11	PIN, CONNECTOR 15P	
CN5041	1-580-176-11	PIN, CONNECTOR 10P	
* CN5042	1-568-419-11	PIN, CONNECTOR 9P	
		< DIODE >	
D551	8-719-911-19	DIODE 1SS199-25	
D552	8-719-911-19	DIODE 1SS199-25	
D901	8-719-500-56	DIODE D3SBA20	
D902	8-719-024-99	DIODE 11ES2-NTA2B (AEP, UK)	
D903	8-719-024-99	DIODE 11ES2-NTA2B	
D904	8-719-024-99	DIODE 11ES2-NTA2B	
D911	8-719-024-99	DIODE 11ES2-NTA2B	
D912	8-719-110-72	DIODE RD30ESB2	
D913	8-719-109-89	DIODE RD5.6ESB2	
D920	8-719-024-99	DIODE 11ES2-NTA2B	
D921	8-719-911-19	DIODE 1SS199-25	
D922	8-719-024-99	DIODE 11ES2-NTA2B	
D923	8-719-024-99	DIODE 11ES2-NTA2B	
D941	8-719-911-19	DIODE 1SS199-25	
D942	8-719-911-19	DIODE 1SS199-25	
D943	8-719-911-19	DIODE 1SS199-25	
D944	8-719-911-19	DIODE 1SS199-25	
D945	8-719-911-19	DIODE 1SS199-25	
		< GROUND TERMINAL >	
EPT901	1-537-770-21	TERMINAL BOARD, GROUND	
EPT902	1-537-770-21	TERMINAL BOARD, GROUND	
		< IC >	
IC501	8-759-827-45	IC M30622MGA-A39FP	
IC551	8-759-635-63	IC M51943BSL	
IC901	8-759-158-62	IC TA78057S	
IC903	8-759-656-35	IC NJM7810FA	
IC904	8-759-039-69	IC uPC7805AHF	
IC951	8-749-923-05	IC TORX178B (OPTICAL IN)	
IC952	8-749-923-05	IC TORX178B (OPTICAL IN)	
IC991	8-759-982-15	IC RC7815FA	
		< COIL >	
L951	1-414-193-41	INDUCTOR 220uH	
L955	1-410-682-31	INDUCTOR 470uH	
		< TRANSISTOR >	
Q502	8-729-422-57	TRANSISTOR UN4111	
Q503	8-729-422-57	TRANSISTOR UN4111	
Q551	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q901	8-729-140-97	TRANSISTOR 2SB734-34	
Q902	8-729-011-92	TRANSISTOR 2SC2001TP-K1K2	
		< RESISTOR >	
R501	1-247-807-31	CARBON 100 5% 1/4W	
R502	1-247-807-31	CARBON 100 5% 1/4W	
R503	1-247-807-31	CARBON 100 5% 1/4W	
R504	1-247-807-31	CARBON 100 5% 1/4W	
R505	1-247-807-31	CARBON 100 5% 1/4W	
R506	1-247-807-31	CARBON 100 5% 1/4W	
R507	1-247-807-31	CARBON 100 5% 1/4W	
R508	1-249-429-11	CARBON 10K 5% 1/4W	
R509	1-247-891-00	CARBON 330K 5% 1/4W	
R510	1-249-411-11	CARBON 330 5% 1/4W	
R511	1-249-429-11	CARBON 10K 5% 1/4W	
R512	1-247-807-31	CARBON 100 5% 1/4W	
R513	1-247-807-31	CARBON 100 5% 1/4W	
R514	1-247-807-31	CARBON 100 5% 1/4W	
R515	1-249-417-11	CARBON 1K 5% 1/4W	
R516	1-247-807-31	CARBON 100 5% 1/4W	
R517	1-247-807-31	CARBON 100 5% 1/4W	
R518	1-247-807-31	CARBON 100 5% 1/4W	
R519	1-249-429-11	CARBON 10K 5% 1/4W	
R520	1-249-429-11	CARBON 10K 5% 1/4W	
R521	1-247-807-31	CARBON 100 5% 1/4W	
R522	1-249-429-11	CARBON 10K 5% 1/4W	
R523	1-247-807-31	CARBON 100 5% 1/4W	
R524	1-249-437-11	CARBON 47K 5% 1/4W	
R525	1-247-807-31	CARBON 100 5% 1/4W	
R526	1-247-807-31	CARBON 100 5% 1/4W	
R527	1-247-807-31	CARBON 100 5% 1/4W	
R528	1-247-807-31	CARBON 100 5% 1/4W	
R529	1-247-807-31	CARBON 100 5% 1/4W	
R530	1-247-807-31	CARBON 100 5% 1/4W	
R531	1-247-807-31	CARBON 100 5% 1/4W	
R532	1-249-437-11	CARBON 47K 5% 1/4W	
R533	1-247-807-31	CARBON 100 5% 1/4W	
R534	1-247-807-31	CARBON 100 5% 1/4W	
R535	1-247-807-31	CARBON 100 5% 1/4W	
R536	1-247-807-31	CARBON 100 5% 1/4W	
R537	1-247-807-31	CARBON 100 5% 1/4W	
R538	1-247-807-31	CARBON 100 5% 1/4W	
R539	1-247-807-31	CARBON 100 5% 1/4W	
R540	1-247-807-31	CARBON 100 5% 1/4W	
R541	1-249-437-11	CARBON 47K 5% 1/4W	
R542	1-249-437-11	CARBON 47K 5% 1/4W	
R543	1-249-407-11	CARBON 150 5% 1/4W	
R544	1-249-425-11	CARBON 4.7K 5% 1/4W	
R545	1-249-417-11	CARBON 1K 5% 1/4W	(MX)
R545	1-249-425-11	CARBON 4.7K 5% 1/4W	(KR, AUS)
R545	1-249-429-11	CARBON 10K 5% 1/4W	(AEP, UK)
R546	1-249-407-11	CARBON 150 5% 1/4W	(KR, AUS)
R546	1-249-425-11	CARBON 4.7K 5% 1/4W	(MX)
R548	1-249-425-11	CARBON 4.7K 5% 1/4W	

MAIN **PANEL**

Ref. No.	Part No.	Description			Remark
R549	1-247-843-11	CARBON	3.3K	5%	1/4W
R550	1-249-441-11	CARBON	100K	5%	1/4W
R551	1-249-413-11	CARBON	470	5%	1/4W
R552	1-249-429-11	CARBON	10K	5%	1/4W
R553	1-249-437-11	CARBON	47K	5%	1/4W
R554	1-249-437-11	CARBON	47K	5%	1/4W
R555	1-249-407-11	CARBON	4.7K	5%	1/4W
R556	1-249-437-11	CARBON	47K	5%	1/4W
R557	1-249-433-11	CARBON	22K	5%	1/4W
R558	1-247-903-00	CARBON	1M	5%	1/4W
⚠R903	1-219-153-11	FUSIBLE	10	5%	1/4W F
R904	1-249-429-11	CARBON	10K	5%	1/4W
R905	1-247-807-31	CARBON	100	5%	1/4W
R906	1-247-807-31	CARBON	100	5%	1/4W
R908	1-249-417-11	CARBON	1K	5%	1/4W
R911	1-249-409-11	CARBON	220	5%	1/4W
R912	1-249-442-11	CARBON	510	5%	1/4W
R941	1-249-417-11	CARBON	1K	5%	1/4W
R942	1-249-417-11	CARBON	1K	5%	1/4W
R943	1-247-843-11	CARBON	3.3K	5%	1/4W
R951	1-249-413-11	CARBON	470	5%	1/4W
R952	1-249-413-11	CARBON	470	5%	1/4W
R956	1-247-807-31	CARBON	100	5%	1/4W
R957	1-247-807-31	CARBON	100	5%	1/4W
R958	1-247-807-31	CARBON	100	5%	1/4W
R959	1-247-807-31	CARBON	100	5%	1/4W
R961	1-249-421-11	CARBON	2.2K	5%	1/4W
R962	1-249-421-11	CARBON	2.2K	5%	1/4W
R963	1-249-426-11	CARBON	5.6K	5%	1/4W
R964	1-249-426-11	CARBON	5.6K	5%	1/4W
R965	1-247-807-31	CARBON	100	5%	1/4W
R966	1-247-807-31	CARBON	100	5%	1/4W
		< VIBRATOR >			
X501	1-567-098-41	VIBRATOR, CRYSTAL (32.768kHz)			
X502	1-781-107-21	VIBRATOR, CERAMIC (16MHz)			
**********					
	A-4476-267-A	PANEL BOARD, COMPLETE (AEP, UK)			
	A-4476-269-A	PANEL BOARD, COMPLETE (KR, MX, AUS)			
		**********			
	4-232-328-01	HOLDER, FL TUBE			
	4-949-935-41	CUSHION (FL)			
		< CAPACITOR >			
C601	1-162-306-11	CERAMIC	0.01uF	30%	16V
C603	1-164-159-11	CERAMIC	0.1uF		50V
C605	1-162-306-11	CERAMIC	0.01uF	30%	16V
C606	1-124-261-00	ELECT	10uF	20%	50V
C607	1-126-382-11	ELECT	100uF	20%	16V
C608	1-164-159-11	CERAMIC	0.1uF		50V
C610	1-124-261-00	ELECT	10uF	20%	50V
C614	1-162-286-31	CERAMIC	220PF	10%	50V
C615	1-162-286-31	CERAMIC	220PF	10%	50V
C649	1-162-306-11	CERAMIC	0.01uF	30%	16V
C650	1-162-306-11	CERAMIC	0.01uF	30%	16V
C651	1-162-282-31	CERAMIC	100PF	10%	50V
C652	1-162-282-31	CERAMIC	100PF	10%	50V

Ref. No.	Part No.	Description			Remark
C653	1-162-282-31	CERAMIC	100PF	10%	50V
C654	1-162-282-31	CERAMIC	100PF	10%	50V
C655	1-162-282-31	CERAMIC	100PF	10%	50V
C656	1-162-282-31	CERAMIC	100PF	10%	50V
C657	1-162-282-31	CERAMIC	100PF	10%	50V
C658	1-162-282-31	CERAMIC	100PF	10%	50V
C659	1-162-282-31	CERAMIC	100PF	10%	50V
C660	1-162-282-31	CERAMIC	100PF	10%	50V
C661	1-162-282-31	CERAMIC	100PF	10%	50V
C662	1-162-282-31	CERAMIC	100PF	10%	50V
C663	1-162-306-11	CERAMIC	0.01uF	30%	16V
C664	1-164-159-11	CERAMIC	0.1uF		50V
C665	1-126-963-11	ELECT	4.7uF	20%	50V
C666	1-126-963-11	ELECT	4.7uF	20%	50V
C667	1-164-159-11	CERAMIC	0.1uF		50V
C668	1-164-159-11	CERAMIC	0.1uF		50V
C669	1-164-159-11	CERAMIC	0.1uF		50V
		< CONNECTOR >			
CN602	1-784-741-11	CONNECTOR, FFC 19P			
		< DIODE >			
D601	8-719-911-19	DIODE 1SS199-25			
		< FLUORESCENT INDICATOR TUBE >			
FL601	1-518-744-11	TUBE, FLUORESCENT INDICATOR			
		< IC >			
IC601	8-759-828-68	IC MB90M407PF-G-102-BND			
		< RESISTOR >			
R601	1-249-429-11	CARBON	10K	5%	1/4W
R602	1-249-429-11	CARBON	10K	5%	1/4W
R603	1-249-429-11	CARBON	10K	5%	1/4W
R604	1-247-807-31	CARBON	100	5%	1/4W
R605	1-247-807-31	CARBON	100	5%	1/4W
R606	1-249-429-11	CARBON	10K	5%	1/4W
R607	1-249-429-11	CARBON	10K	5%	1/4W
R608	1-249-429-11	CARBON	10K	5%	1/4W
R616	1-249-441-11	CARBON	100K	5%	1/4W
R617	1-249-410-11	CARBON	270	5%	1/4W
R618	1-249-413-11	CARBON	470	5%	1/4W
R619	1-249-414-11	CARBON	560	5%	1/4W
R620	1-249-416-11	CARBON	820	5%	1/4W
R621	1-249-417-11	CARBON	1K	5%	1/4W
R622	1-249-418-11	CARBON	1.2K	5%	1/4W
R623	1-249-419-11	CARBON	1.5K	5%	1/4W
R624	1-249-421-11	CARBON	2.2K	5%	1/4W
R625	1-249-422-11	CARBON	2.7K	5%	1/4W
R626	1-249-424-11	CARBON	3.9K	5%	1/4W
R627	1-249-426-11	CARBON	5.6K	5%	1/4W (AEP, UK)
R628	1-249-429-11	CARBON	10K	5%	1/4W
R629	1-249-417-11	CARBON	1K	5%	1/4W
R630	1-249-429-11	CARBON	10K	5%	1/4W
R631	1-249-417-11	CARBON	1K	5%	1/4W
R632	1-249-429-11	CARBON	10K	5%	1/4W

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

PANEL SIRCS

Ref. No.	Part No.	Description			Remark
R633	1-249-417-11	CARBON	1K	5%	1/4W
R634	1-249-429-11	CARBON	10K	5%	1/4W
R635	1-249-417-11	CARBON	1K	5%	1/4W
R636	1-249-429-11	CARBON	10K	5%	1/4W
R637	1-249-417-11	CARBON	1K	5%	1/4W
R638	1-249-429-11	CARBON	10K	5%	1/4W
R639	1-249-417-11	CARBON	1K	5%	1/4W
R677	1-249-417-11	CARBON	1K	5%	1/4W
		< SWITCH >			
S601	1-771-410-21	SWITCH, TACTILE (DISPLAY)			
S602	1-771-410-21	SWITCH, TACTILE (CLOCK/TIMER)			
S603	1-771-410-21	SWITCH, TACTILE (TIMER SELECT)			
S604	1-771-410-21	SWITCH, TACTILE (TUNER/BAND)			
S605	1-771-410-21	SWITCH, TACTILE (TUNING +)			
S606	1-771-410-21	SWITCH, TACTILE (TUMIMG –)			
S607	1-771-410-21	SWITCH, TACTILE (ENTER)			
S608	1-771-410-21	SWITCH, TACTILE (PRESET –)			
S609	1-771-410-21	SWITCH, TACTILE (PRESET +)			
S610	1-771-410-21	SWITCH, TACTILE (TUNER MEMORY)			
S611	1-771-410-21	SWITCH, TACTILE (STEREO/MONO)			
S612	1-771-410-21	SWITCH, TACTILE (PTY) (AEP, UK)			
		< VIBRATOR >			
X601	1-577-358-21	VIBRATOR, CERAMIC (4MHz)			
**********					
	1-680-697-11	SIRCS BOARD			
		**********			
		< CAPACITOR >			
C101	1-124-589-11	ELECT	47uF	20%	16V
		< IC >			
IC101	8-749-011-05	IC GP1U28X (REMOTE CONTROL RECEIVER)			
		< RESISTOR >			
R101	1-249-401-11	CARBON	47	5%	1/4W
R102	1-249-401-11	CARBON	47	5%	1/4W
**********					
		MISCELLANEOUS			
		**********			
2	1-773-114-11	WIRE (FLAT TYPE) (19 CORE)			
54	1-757-599-11	WIRE (FLAT TYPE) (21 CORE)			
55	1-757-600-11	WIRE (FLAT TYPE) (23 CORE)			
56	1-757-629-11	CORD (WITH CONNECTOR) 5P			
57	1-757-631-11	CORD (WITH CONNECTOR) 20P			
58	1-757-630-11	CORD (WITH CONNECTOR) 19P			
60	1-769-940-11	WIRE (FLAT TYPE) (11 CORE) (KR, MX, AUS)			
60	1-773-004-11	WIRE (FLAT TYPE) (15 CORE) (AEP, UK)			
61	1-693-529-11	TUNER PACK (FM/AM) (AEP, UK)			
61	1-693-531-71	TUNER PACK (FM/AM) (MX, AUS)			
61	1-693-538-11	TUNER PACK (FM/AM) (KR)			

TC-S3

SERVICE MANUAL

AEP Model
UK Model
E Model
Australian Model

Ver 1.0 2001.04

TC-S3 is the Tape deck section in MHC-S7AV/SV7AV/S3.

Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
"DOLBY" and the double-D symbol ⧈ are trademarks of Dolby Laboratories Licensing Corporation.

Tape deck Section	Model Name Using Similar Mechanism	NEW
	Tape Transport Mechanism Type	TCM-230AWR41/ 230MWR41

SPECIFICATIONS

Recording system	4-track 2-channel stereo
Frequency response (DOLBY NR OFF)	60 – 13,000 Hz (±3 dB), using Sony TYPE I cassette, 60 – 14,000 Hz (±3 dB), using Sony TYPE II cassette
Wow and flutter	±0.15% W.Peak (IEC) 0.1% W.RMS (NAB) ±0.2% W.Peak (DIN)
Dimensions (w/h/d)	Approx. 280 x 128 x 330 mm
Mass	Approx. 2.4 kg

Design and specifications are subject to change without notice.

STEREO CASSETTE DECK

9-873-837-11
2001D0500-1
© 2001.4

Sony Corporation
Home Audio Company
Shinagawa Tec Service Manual Production Group

SONY®

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Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

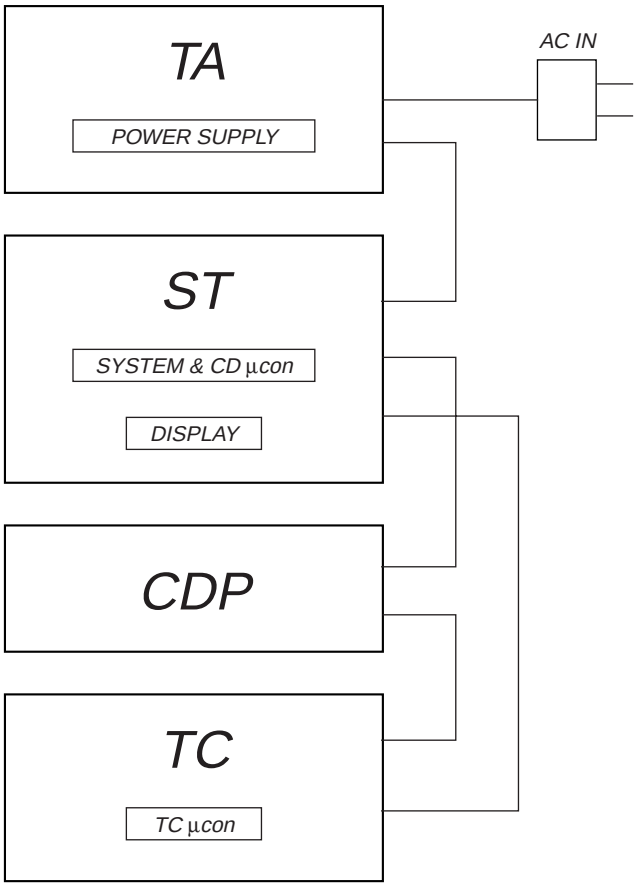
SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

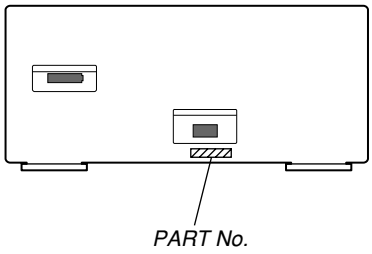
SECTION 1
SERVICING NOTES

This set is a component of the MHC-S7AV, MHC-SV7AV and MHC-S3.
The MHC-S7AV/SV7AV/S3 system configuration is as shown below, and therefore it does not operate normally unless all four components are connected.
In performing the repair, connect all components with the system cables.
Note: The precaution to the users is described on the label stuck on the back panel (CD player) and in the troubleshooting section in the Operation Manual.

System Configuration:



• MODEL IDENTIFICATION
– Rear Panel –



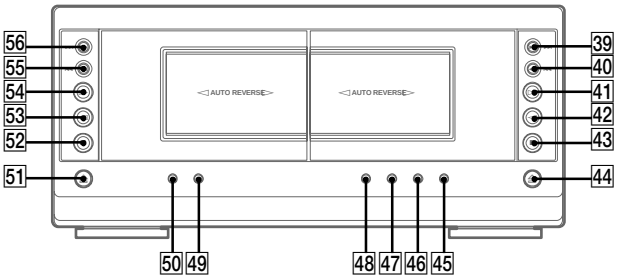
Model	PART No.
AEP and UK models	4-233-093-0□
Australian, Saudi Arabia and Korean models	4-233-093-1□
Sigapore model	4-233-093-2□
Thailand and Mexican models	4-233-093-3□

SECTION 2
GENERAL

This section is extracted from instruction manual.

LOCATION OF CONTROLS

– Front Panel –

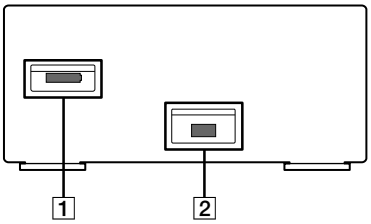


CD SYNC 46 (20, 21)
DIRECTION 50 (19, 20, 21)
DOLBY NR 49 (19, 20)
EDIT 48 (21)
HI-DUB 47 (20)
REC PAUSE/START 45 (20, 21)

– Deck A –
► (forward play) 54 (19, 35)
◄ (reverse play) 53 (19, 35)
■ (stop) 52 (19)
►►/►►I (fast forward/go forward) 56 (19)
◄◄/I◄◄ (rewind/go back) 55 (19)
⏏ (eject) 51 (19)

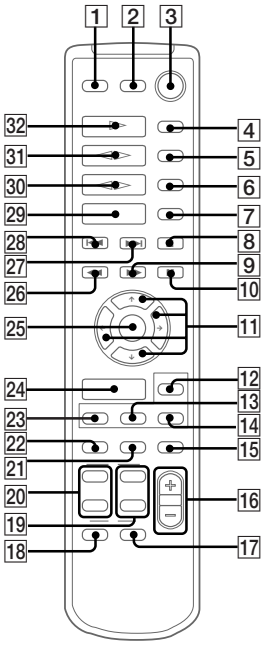
– Deck B –
► (forward play) 41 (19, 20, 35)
◄ (reverse play) 42 (19, 20, 35)
■ (stop) 43 (19, 20)
►►/►►I (fast forward/go forward) 39 (19)
◄◄/I◄◄ (rewind/go back) 40 (19)
⏏ (eject) 44 (19)

– Rear Panel –



1 SYSTEM CONTROL 5 connector (FROM CDP-S3/MCE-VS77)
2 SYSTEM CONTROL 4 connector (FROM ST-S5/S3/VS77)

Remote Control



CD ▷ 32 (14, 15)
CHECK 5 (15)
CLEAR 6 (15)
CLOCK/TIMER SELECT 17 (30)
CLOCK/TIMER SET 18 (13, 21, 29)
DBFB 15 (23)
DISPLAY 22 (13, 16, 18, 29, 35)
D.SKIP 4 (14)
ENTER 25 (10, 12, 13, 15, 17, 18, 21, 22, 26–30)
EQ 13 (27)
EQ ON/OFF 14 (10, 28)
FUNCTION 24 (10, 14, 15, 20, 21, 31)
GROOVE 21 (23)
SET UP 12 (10, 12, 26, 28, 29)
SLEEP 7 (29)
SUR 23 (25)
TAPE A ◁▷ 31 (19, 35)
TAPE B ◁▷ 30 (19, 20, 35)
TUNER/BAND 29 (17)
TUNING + 9 (17)
TUNING – 26 (17)
TV CH +/– 19
TV VOL +/– 20
TV I/⏻ 2
TV/VIDEO 1
VOL +/– 16

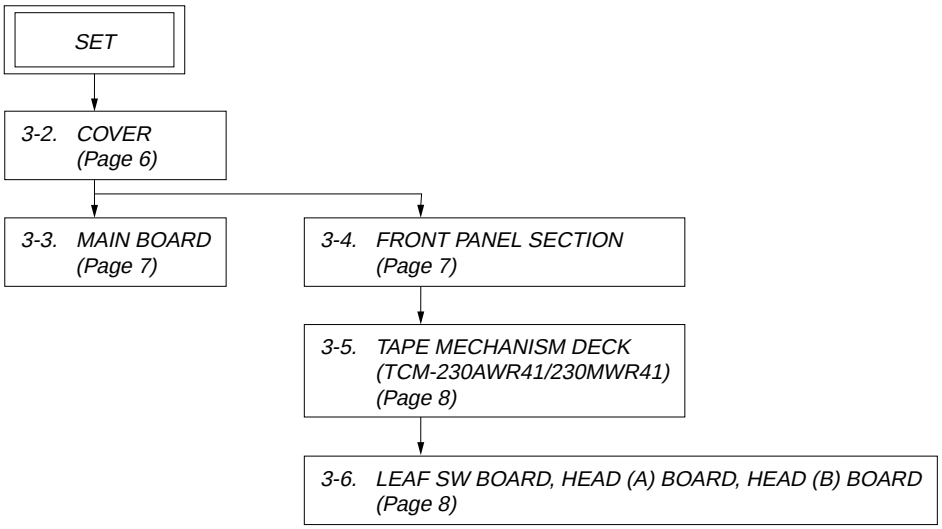
BUTTON DESCRIPTIONS

I/⏻ (power) 3
II (pause) 10
■ (stop) 8
I◀◀ (go back) 28
▶▶I (go forward) 27
◀◀ (rewind) 26
▶▶ (fast forward) 9
↑/↓/←/→ 11

SECTION 3
DISASSEMBLY

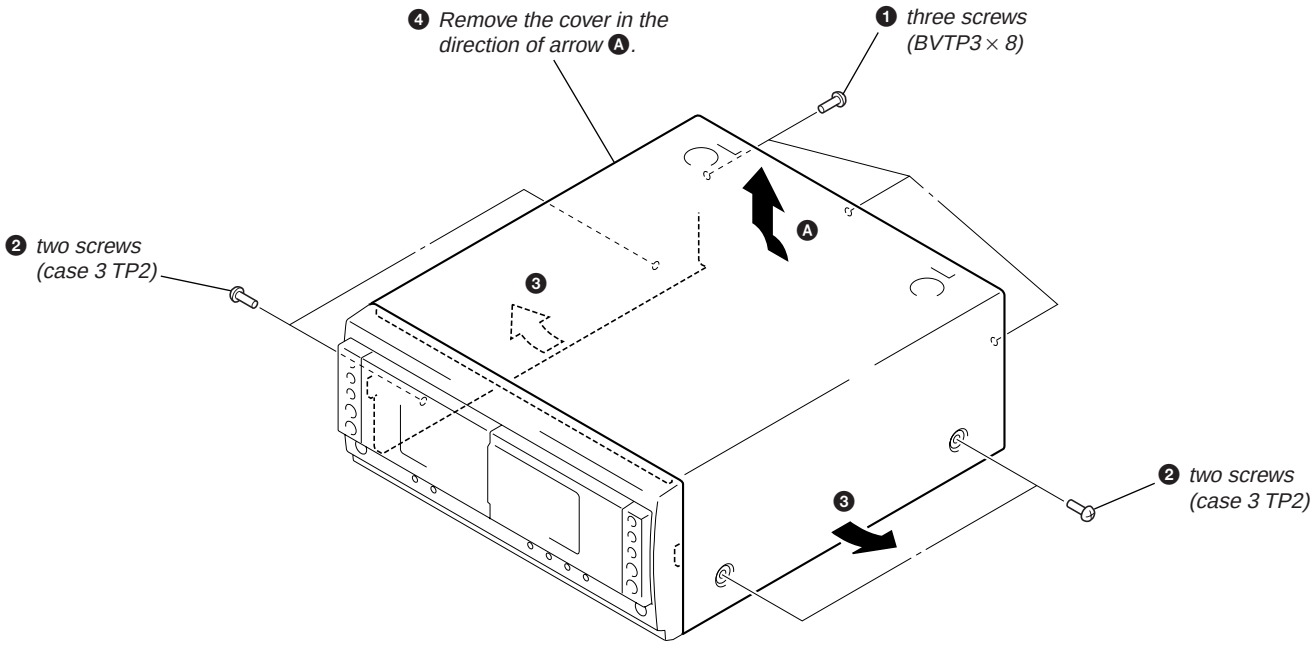
• This set can be disassembled in the order shown below.

3-1. DISASSEMBLY FLOW

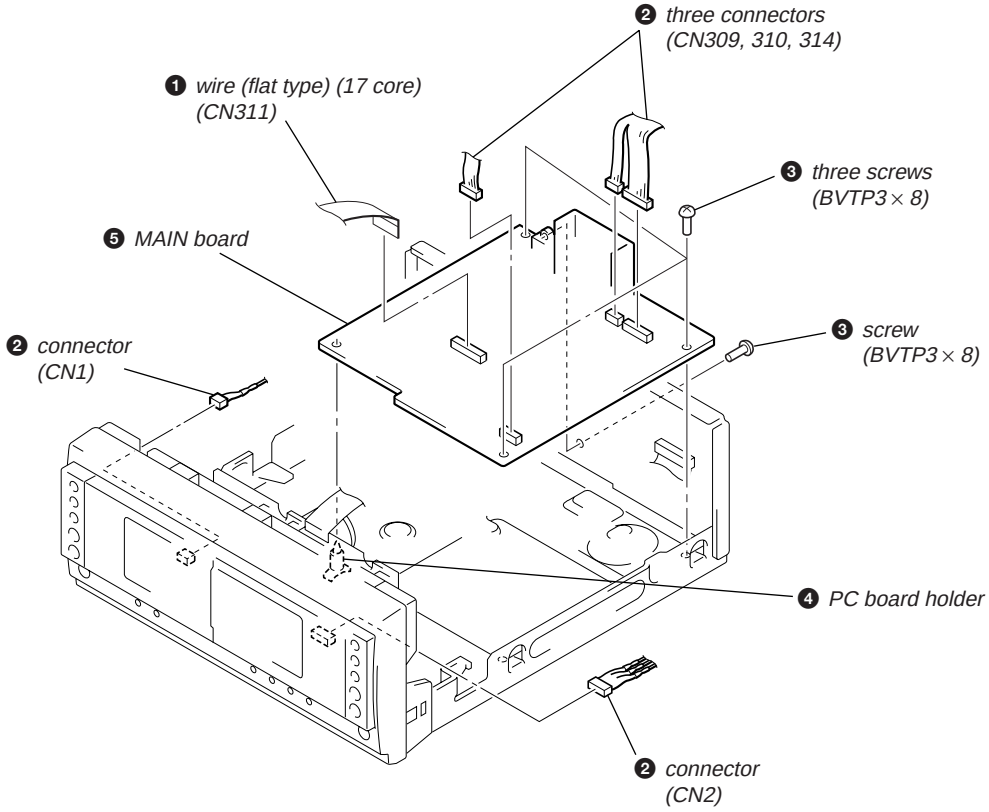

SET
3-2. COVER (Page 6)
3-3. MAIN BOARD (Page 7)
3-4. FRONT PANEL SECTION (Page 7)
3-5. TAPE MECHANISM DECK (TCM-230AWR41/230MWR41) (Page 8)
3-6. LEAF SW BOARD, HEAD (A) BOARD, HEAD (B) BOARD (Page 8)

Note: Follow the disassembly procedure in the numerical order given.

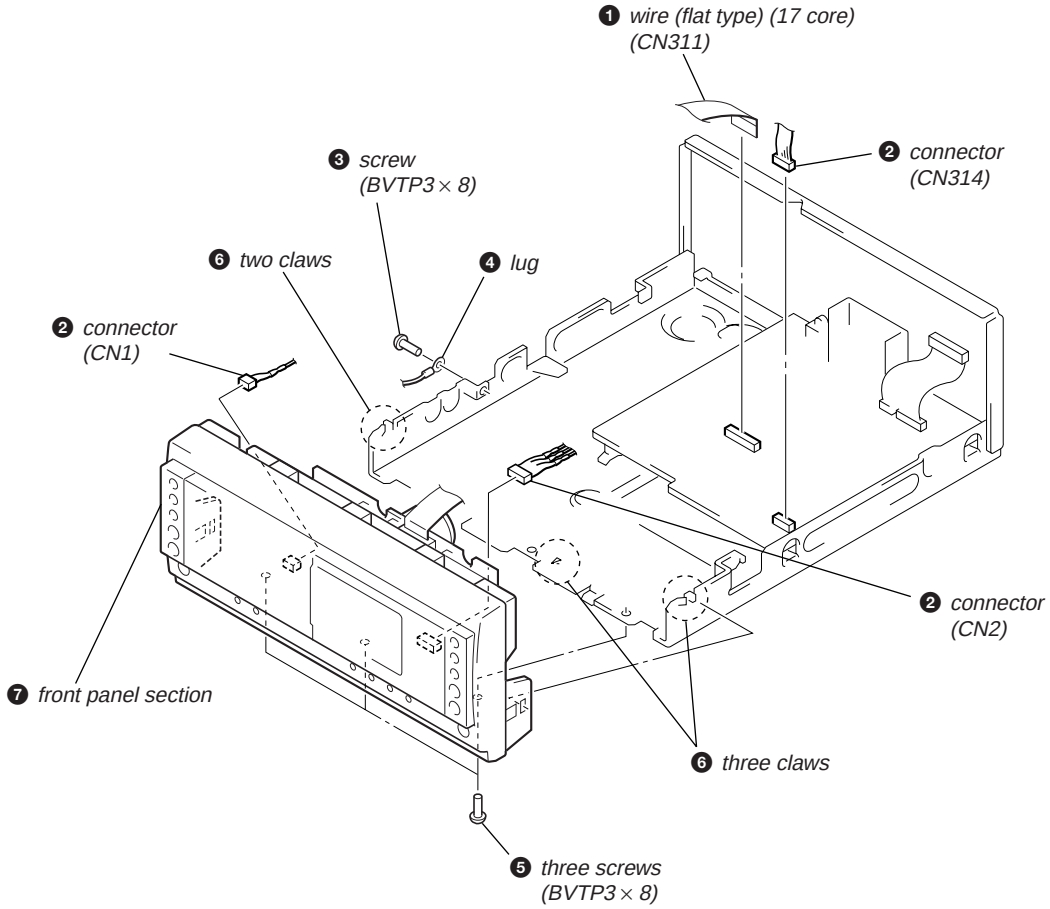
3-2. COVER



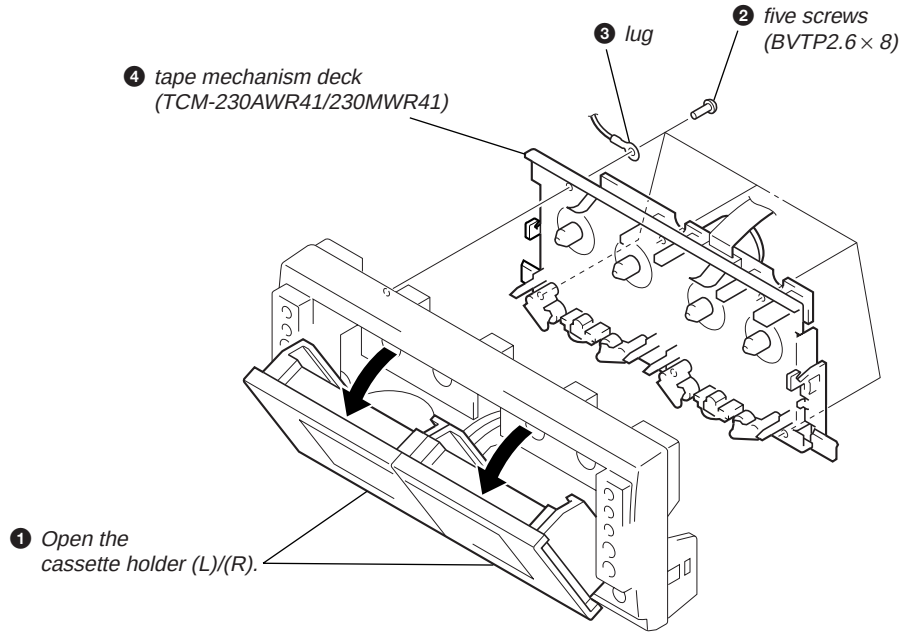
3-3. MAIN BOARD



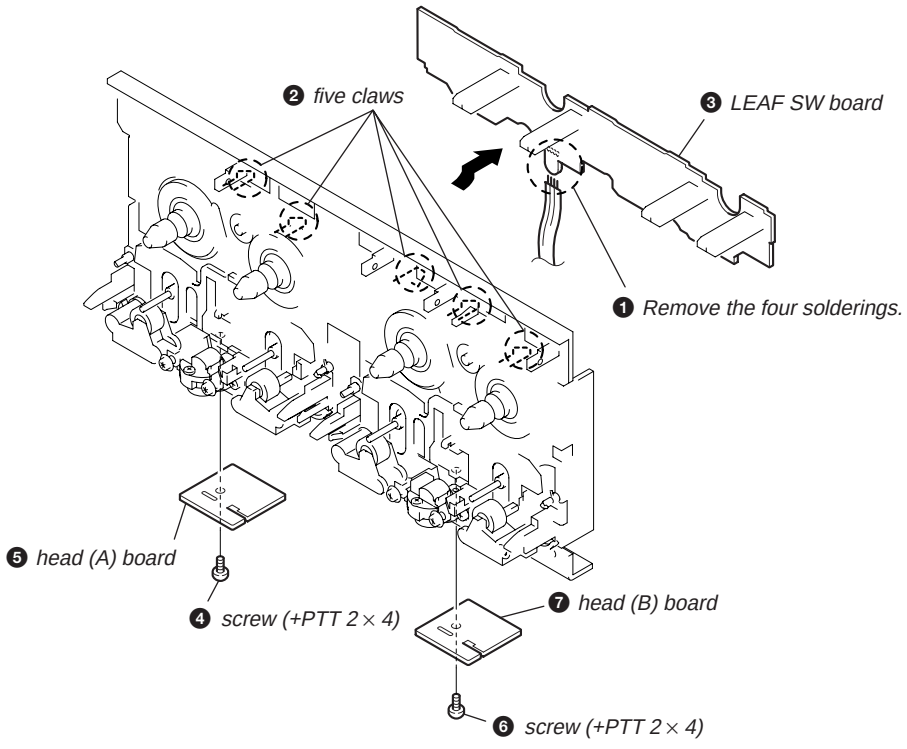
3-4. FRONT PANEL SECTION



3-5. TAPE MECHANISM DECK (TCM-230AWR41/230MWR41)



3-6. LEAF SW BOARD, HEAD (A) BOARD, HEAD (B) BOARD



SECTION 4
TEST MODE

Note: Use following buttons in the test mode.
no mark : Button of Tape unit (TC-S3)
*1 : Button of amplifier unit (TA-S7AV or TA-S3)
*2 : Button of CD unit (CDP-S3)

[MC Test Mode]

Enter the MC Test Mode

Procedure:

1. Press the I/⏻ *1 button to turn the power on.
2. While pressing the both PLAY MODE *2 and ■ *2 buttons, press the DISC 3 *2 button.
3. "GROOVE" indication blinks on the fluorescent indicator tube in the midst of MC test mode.

Releasing the MC Test Mode

To release from this mode, press the I/⏻ *1 button or disconnect the power cord.

[DECK Test Mode]

In the DECK test mode, it operates as follows.

Cancellation of the linear mute of DOLBY IC (IC301)

- It become cancellation automatically when it is possible to enter a MC test mode.

AMS checking

Procedure:

1. Enter the MC test mode.
2. Insert a test tape AMS-110A or AMS-120 to Deck A.
3. Set TAPE A function.
4. Press the CD SYNC button to enter the AMS test mode.
5. After a tape is rewound first, the FF AMS is checked, and the mechanism is shut off after detecting the ASM signal twice.
6. Then the REW AMS is checked and the mechanism is shut off after detecting the AMS signal twice.
7. When the check is complete, a message of either OK or NG appears.

(To check an AMS of the B deck, select TAPE B function.
After that, press CD SYNC.)

ALC checking

Procedure:

1. Enter the MC test mode.
2. Insert a tape into Deck B.
3. During Recording, Keep holding down the below keys.
   ■ *2 + REC PAUSE/START
   ALC could keep ON while these keys keep being pressed, ALC could keep OFF while keys are released.

Double speed REC mode

Procedure:

1. Enter the MC test mode
2. Insert a tape into Deck B.
3. During Recording, keep holding down the below key.
   HI-DUB
   Double speed recording is going on while the key keeps being pressed.

REC/PLAY checking

- The mode to PLAY by rewinding recording contents automatically.

Procedure:

1. If recording A surface, it returns automatically at the point of the recording beginning and it replays when pressing TAPE B ▶▶.
2. If recording B surface, it returns automatically at the point of the recording beginning and it replays when pressing TAPE B ◀◀.

SECTION 5
MECHANICAL ADJUSTMENTS

Precaution

1. Clean the following parts with a denatured alcohol-moistened swab:
   record/playback heads, erase head, capstan, pinch rollers, rubber belts, idlers
2. Demagnetize the record/playback head with a head demagnetizer.
3. Do not use a magnetized screwdriver for the adjustments.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustments should be performed with the rated power supply voltage unless otherwise noted.

Torque Measurement

Mode	Torque meter	Meter reading
FWD	CQ-102C	3.06 N • m to 6.96 N • m 31 to 71 g • cm (0.43 – 0.98 oz • inch)
FWD back tension	CQ-102C	0.19 N • m to 0.58 N • m 2 to 6 g • cm (0.02 – 0.08 oz • inch)
REV	CQ-102RC	3.06 N • m to 6.96 N • m 31 to 71 g • cm (0.43 – 0.98 oz • inch)
REV back tension	CQ-102RC	0.19 N • m to 0.58 N • m 2 to 6 g • cm (0.02 – 0.08 oz • inch)
FF/REW	CQ-201B	6.96 N • m to 14.02 N • m 71 to 143 g • cm (0.98 – 1.99 oz • inch)
FWD tension	CQ-403A	9.80 N • m 100 g or more (3.53 oz or more)
REV tension	CQ-403R	9.80 N • m 100 g or more (3.53 oz or more)

SECTION 6
ELECTRICAL ADJUSTMENTS

DECK SECTION 0 dB=0.775 V

1. Demagnetize the record/playback head with a head demagnetizer.
2. Do not use a magnetized screwdriver for the adjustments.
3. After the adjustments, apply suitable locking compound to the parts adjust.
4. The adjustments should be performed with the rated power supply voltage unless otherwise noted.
5. The adjustments should be performed in the order given in this service manual. (As a general rule, playback circuit adjustment should be completed before performing recording circuit adjustment.)
6. The adjustments should be performed for both L-CH and R-CH.
7. Switches and controls should be set as follows unless otherwise specified.
8. Please refer to "SERVICING NOTES" (page 3) before adjustments.

• Test Tape

Tape	Signal	Used for
P-4-A100	10 kHz, –10 dB	Azimuth Adjustment
WS-48B	3 kHz, 0 dB	Tape Speed Adjustment
P-4-L300J	315 Hz, 0 dB	Level Adjustment

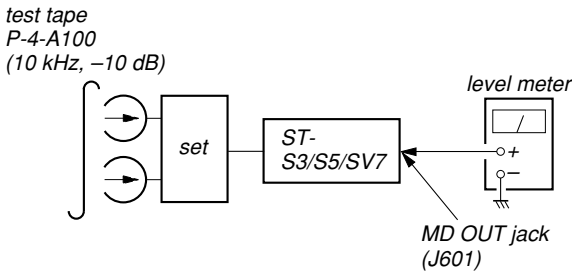
Record/Playback Head Azimuth Adjustment

DECK A **DECK B**

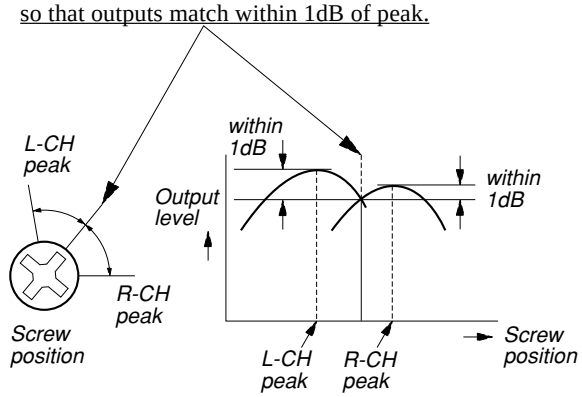
Note: Perform this adjustments for both decks

Procedure:

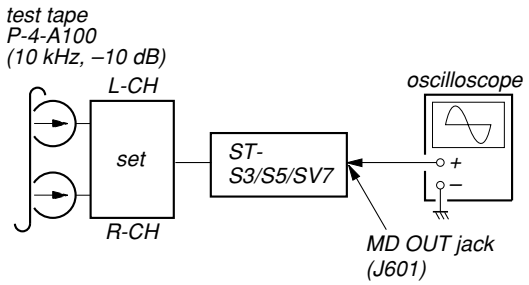
1. Mode: Playback

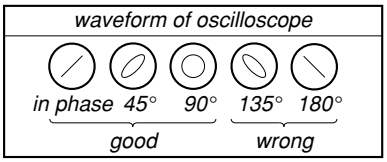


2. Turn the adjustment screw and check output peaks. If the peaks do not match for L-CH and R-CH, turn the adjustment screw so that outputs match within 1dB of peak.



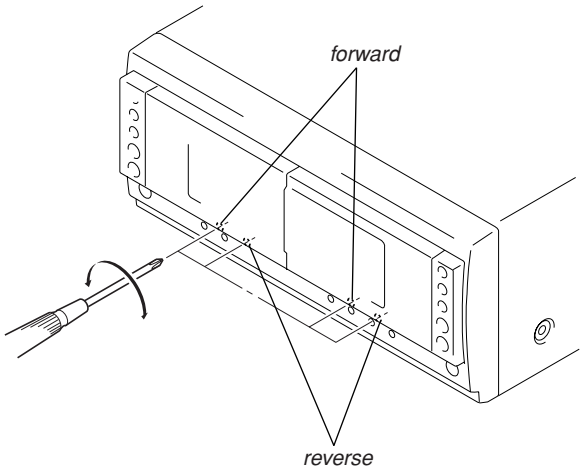
3. Mode: Playback





4. After the adjustments, apply suitable locking compound to the pats adjusted.

Adjustment Location: Playback Head (Deck A).
Record/Playback/Erase Head (Deck B).



Note: Use following buttons in the test mode.
no mark : Button of Tape unit (TC-S3)
*1 : Button of amplifier unit (TA-S7AV or TA-S3)
*2 : Button of CD unit (CDP-S3)

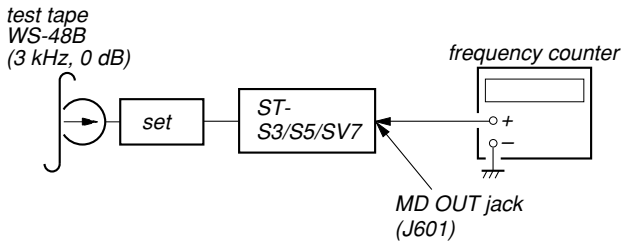
Tape Speed Adjustment DECK B

Note: Start the Tape Speed adjustment as below after setting to the test mode.
In the test mode, the tape speed is high during pressing the HI-DUB button.

Procedure:

1. Turn the power switch on.
2. While pressing the both PLAY MODE *2 and ■ *2 buttons, press the DISC 3 *2 button.
(The "GROOVE" on the fluorescent indicator tube display while in the test mode.)
To exit from the test mode, press the I/⏻ *1 button.

Mode: Playback



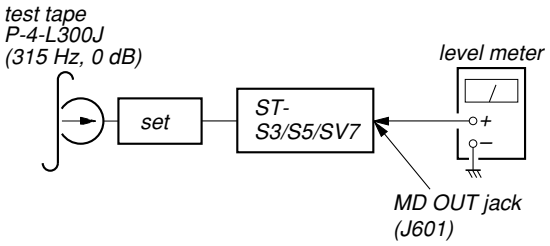
1. Insert the WS-48B into the deck B.
2. Press the ► button on the deck B.
3. Press the HI-DUB button in playback mode.
Then at HIGH speed mode.
4. Adjust RV1001 on the LEAF SW board so that frequency counter reads 6,000 ± 30 Hz.
5. Press the HI-DUB button.
Then back to NORMAL speed mode.
6. Adjust RV1002 on the LEAF SW board so that frequency counter reads 3,000 ± 15 Hz.

Adjustment Location: LEAF SW board

Playback level Adjustment DECK A DECK B

Procedure:

Mode: Playback



1. Confirm that level difference between the channels is with ± 0.5 dB.
2. After check, adjust the following RVs.
Deck A is RV302 (L-CH), Deck B is RV303 (L-CH) so that adjustment within adjustment level as follows.

Adjustment Level:

MD OUT jack (J601) PB level: 334.4 to 748.7 mV
(–6.8 ± 0.5 dB)

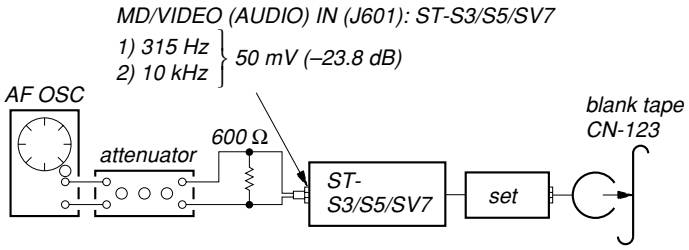
Adjustment Location: MAIN board

Sample Volue of Wow and Flutter: 0.3% or less W. RMS
(WS-48B)

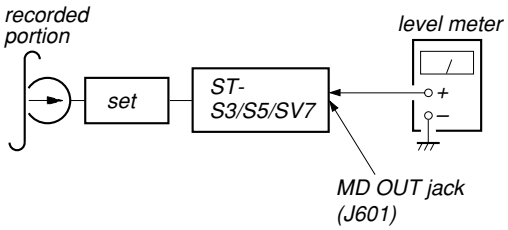
REC Bias Adjustment DECK B

Procedure:

1. Insert a tape into Deck B.
2. After press [REC PAUSE/START] button, press [REC PAUSE/START] button, then recording start.
3. Mode: Record



4. Mode: Playback



5. Confirm the playback signal recorded in step 3 becomes adjustable level as follows.
   If these levels are not adjustable level, adjust the RV304 (L-CH) and RV354 (R-CH) on the MAIN board to repeat steps 4 and 5.

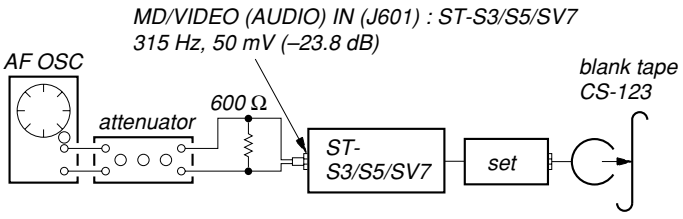
Adjustable level: Playback output of 315 Hz to playback output of 10 kHz: ±1.0 dB

Adjustment Location: MAIN board

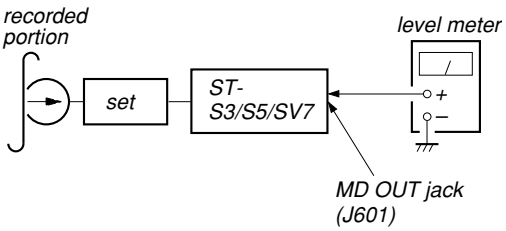
REC Level Adjustment DECK B

Procedure:

1. Insert a tape into Deck B.
2. After press [REC PAUSE/START] button, press [REC PAUSE/START] button, then recording start.
3. Mode: Record



4. Mode: Playback

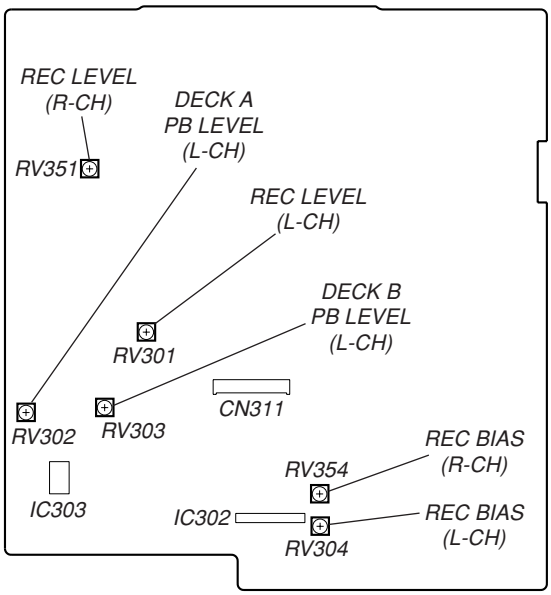


5. Confirm the play back signal recorded in step 3 becomes adjustable level as follows.
   If these levels are not adjustable level, adjust the RV301 (L-CH) and RV351 (R-CH) on the MAIN board to repeat steps 4 and 5.

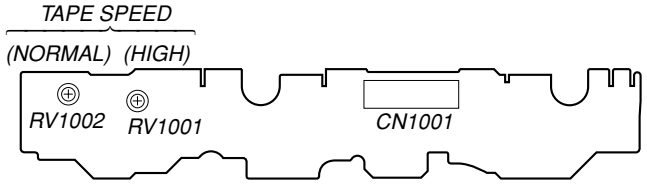
Adjustable level:
MD OUT jack PB level: 47.2 to 53.0 mV (–27.3 to –26.3 dB)

Adjustment Location: MAIN board

[MAIN BOARD] (Component Side)



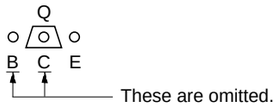
[LEAF SW BOARD] (Component Side)

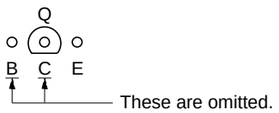


SECTION 7
DIAGRAMS

7-1. NOTE FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

Note on Printed Wiring Boards:
- ○——— : parts extracted from the component side.
- ▬▬ : Pattern from the side which enables seeing.
- Indication of transistor.



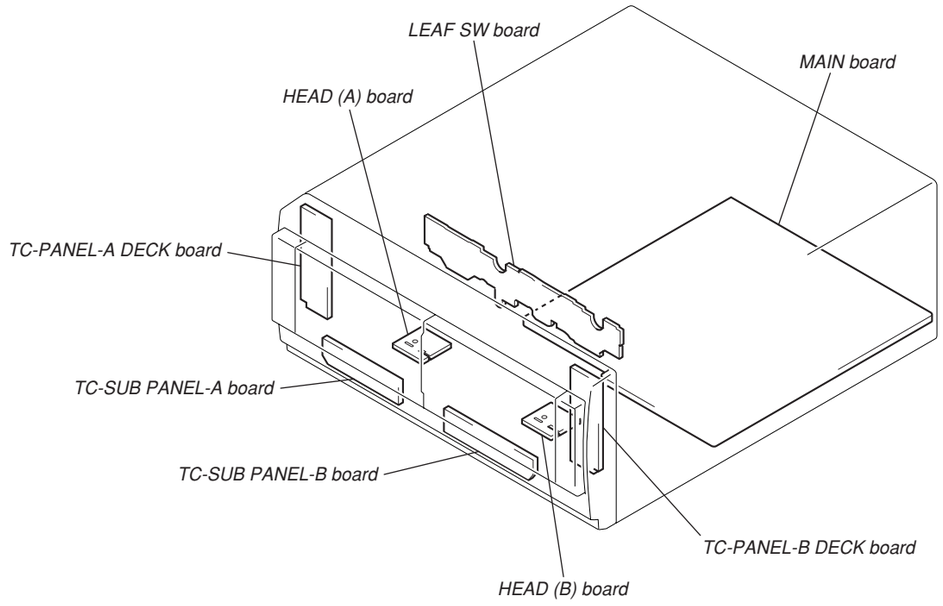


Note on Schematic Diagram:
- All capacitors are in µF unless otherwise noted. pF: µµF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- ⊣∿∿⊢ : fusible resistor.
- ▭ : panel designation.

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

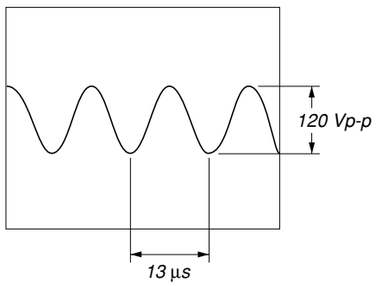
- ▬▬ : B+ Line.
- ▬ ▬ ▬ : B– Line.
- Voltages and waveforms are dc with respect to ground under no-signal conditions.
  no mark : STOP
  ( ) : PB
  ⟨⟨ ⟩⟩ : REC
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ➢ : PB
  ➢➢ : REC

• Circuit Boards Location

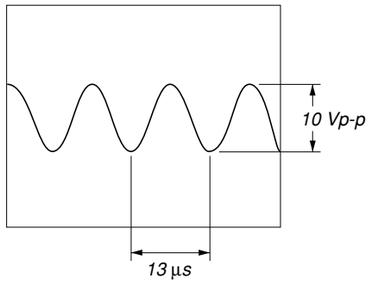


• Waveforms
– MAIN Board –

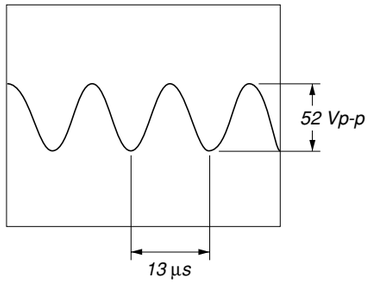
❶ T301 ④ (DECK-B REC mode)



❷ Q301, 303 (collector) (REC mode)

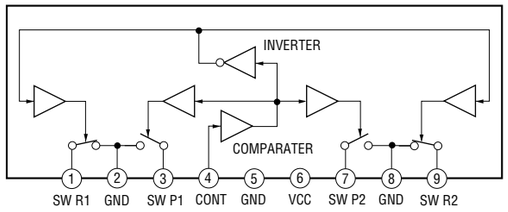


❸ NO312 ⑥ (L-REC), ③ (R-REC) (DECK-B REC mode)

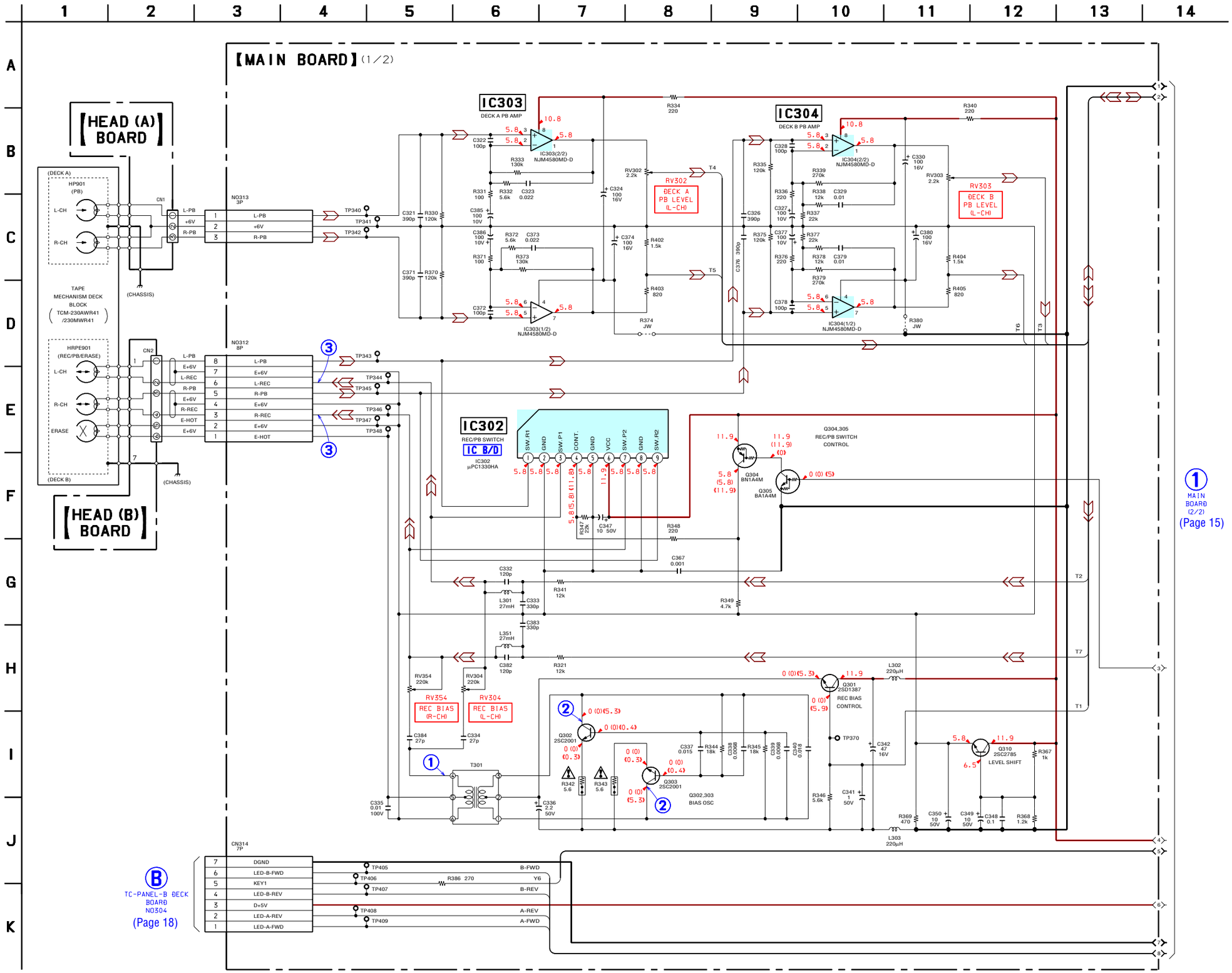


• IC Block Diagram
– MAIN Board –

IC302 µPC1330HA

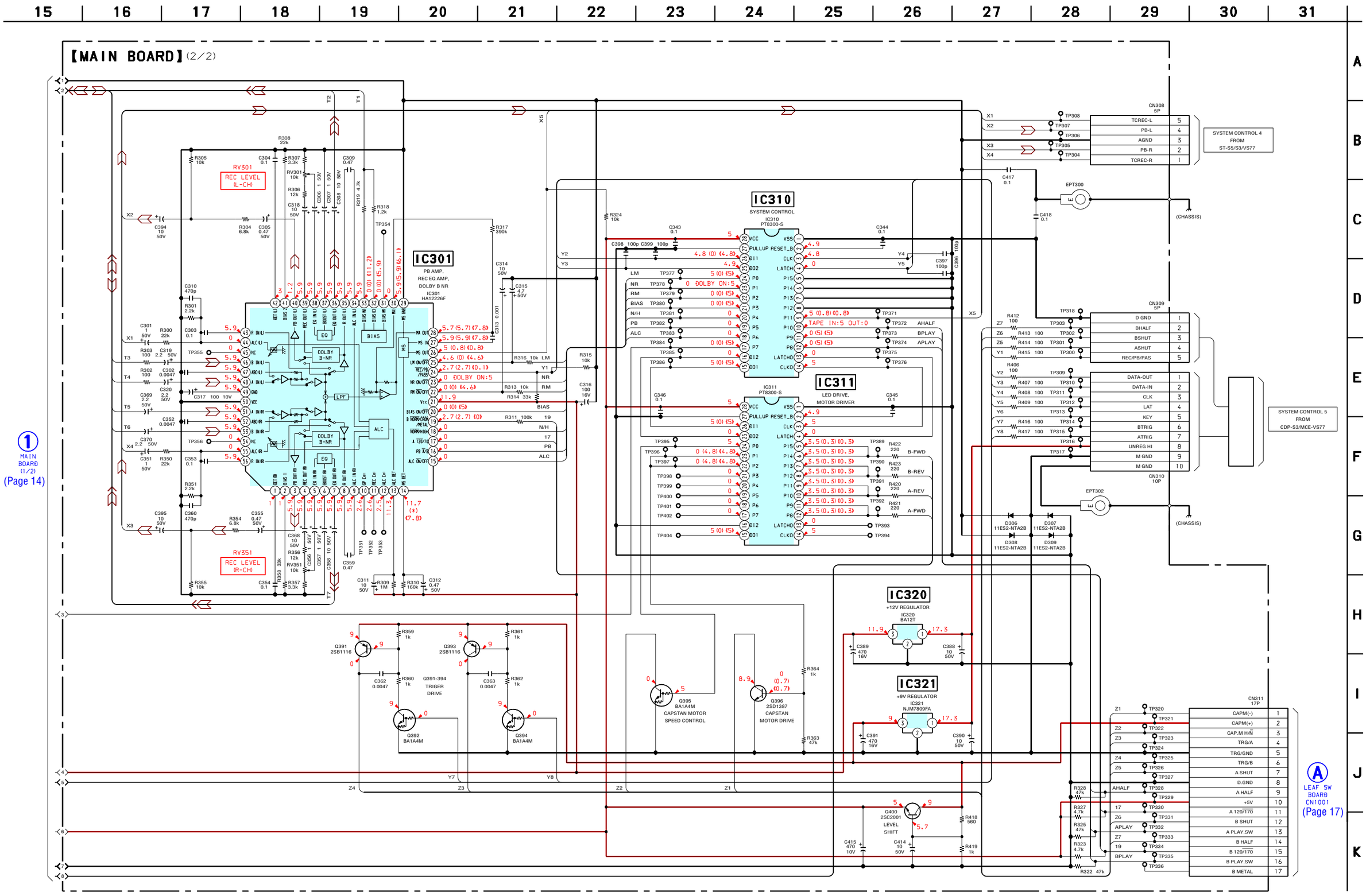


7-2. SCHEMATIC DIAGRAM – MAIN Section (1/2) – • See page 13 for Waveforms. • See page 13 for IC Block Diagram.



The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

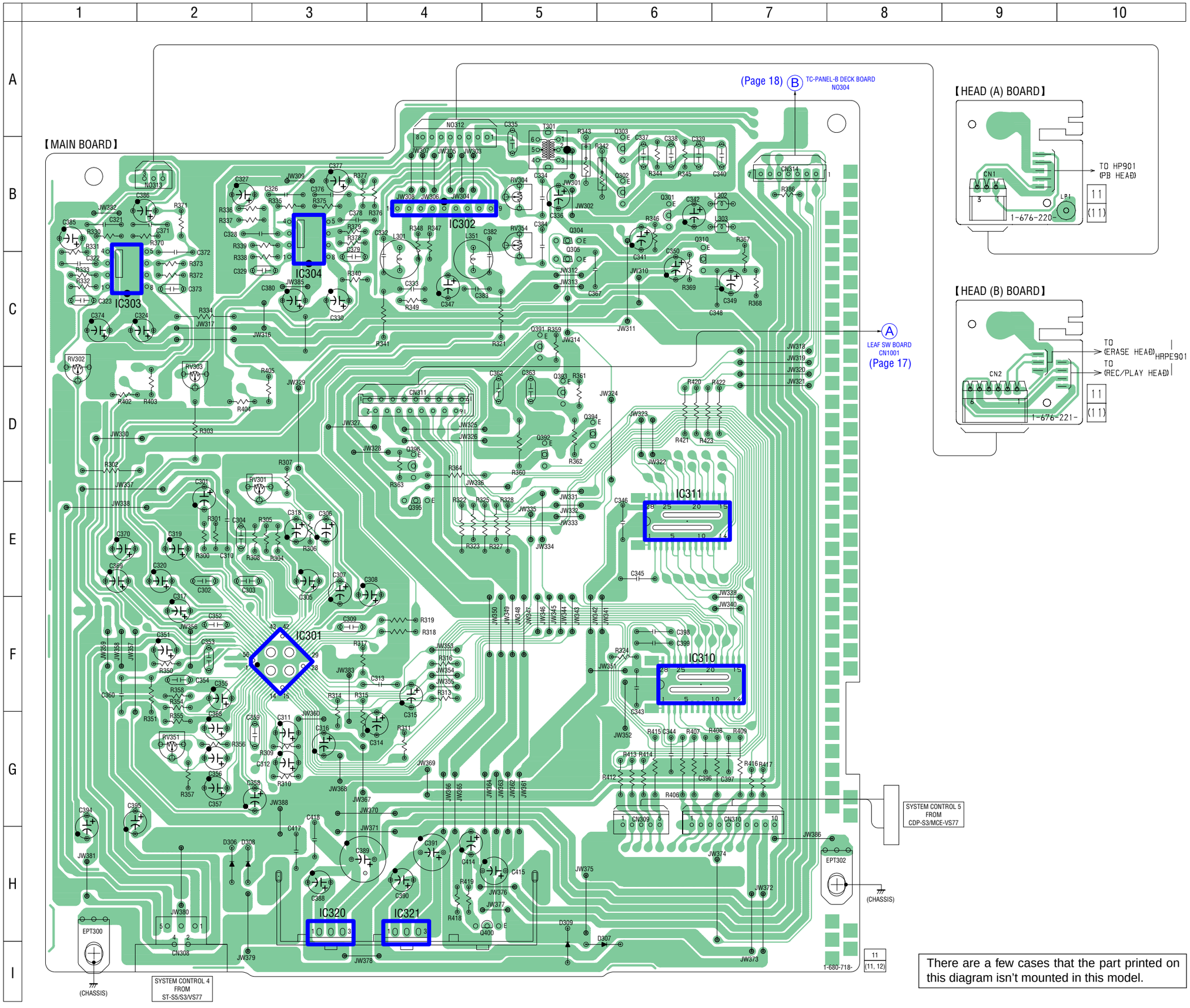
7-3. SCHEMATIC DIAGRAM – MAIN Section (2/2) –



7-4. PRINTED WIRING BOARDS – MAIN Section – • See page 13 for Circuit Boards Location.

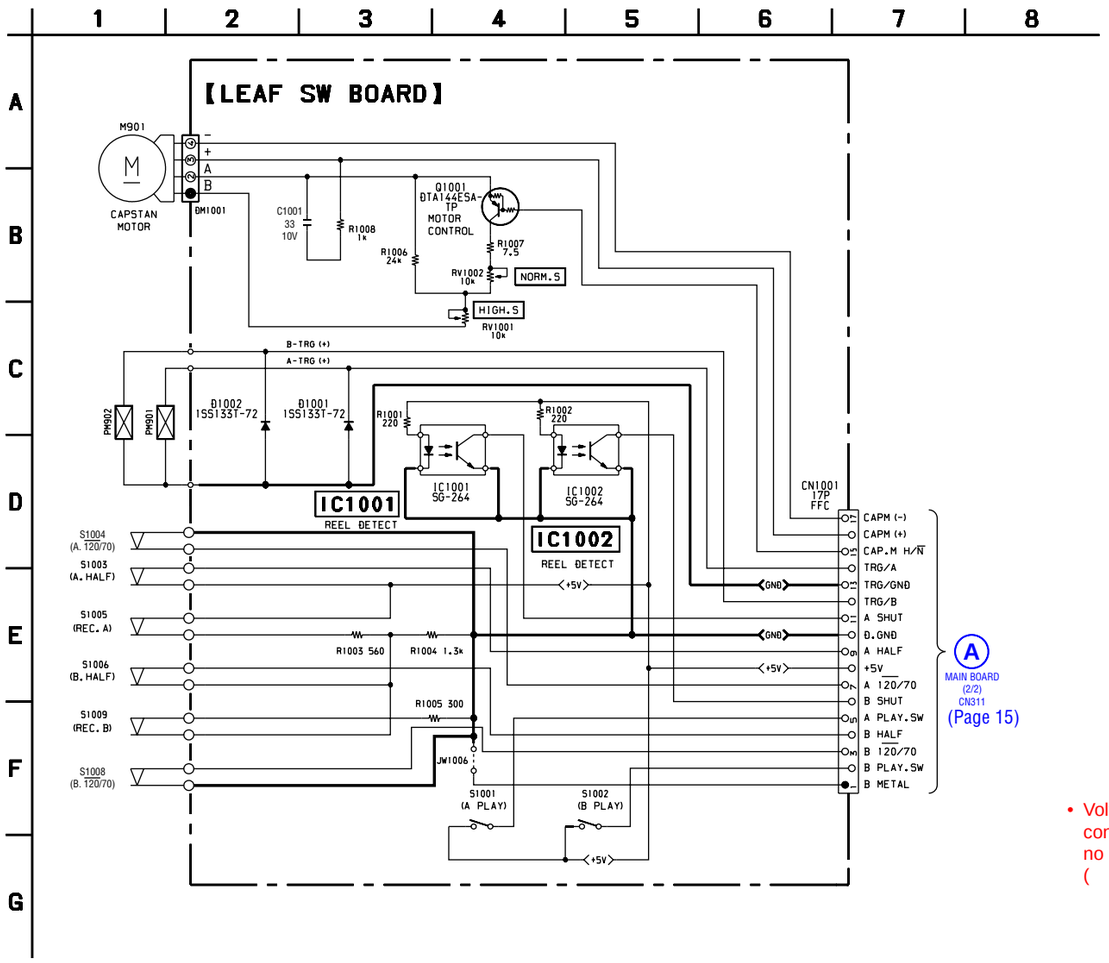
- **Semiconductor Location**

Ref. No.	Location
D306	H-2
D307	I-6
D308	H-2
D309	H-5
IC301	F-3
IC302	B-4
IC303	C-1
IC304	B-3
IC310	F-6
IC311	E-6
IC320	H-3
IC321	H-4
Q301	B-6
Q302	B-6
Q303	B-6
Q304	B-5
Q305	C-5
Q310	C-6
Q391	C-5
Q392	D-5
Q393	D-5
Q394	D-5
Q395	E-4
Q396	D-4
Q400	H-5



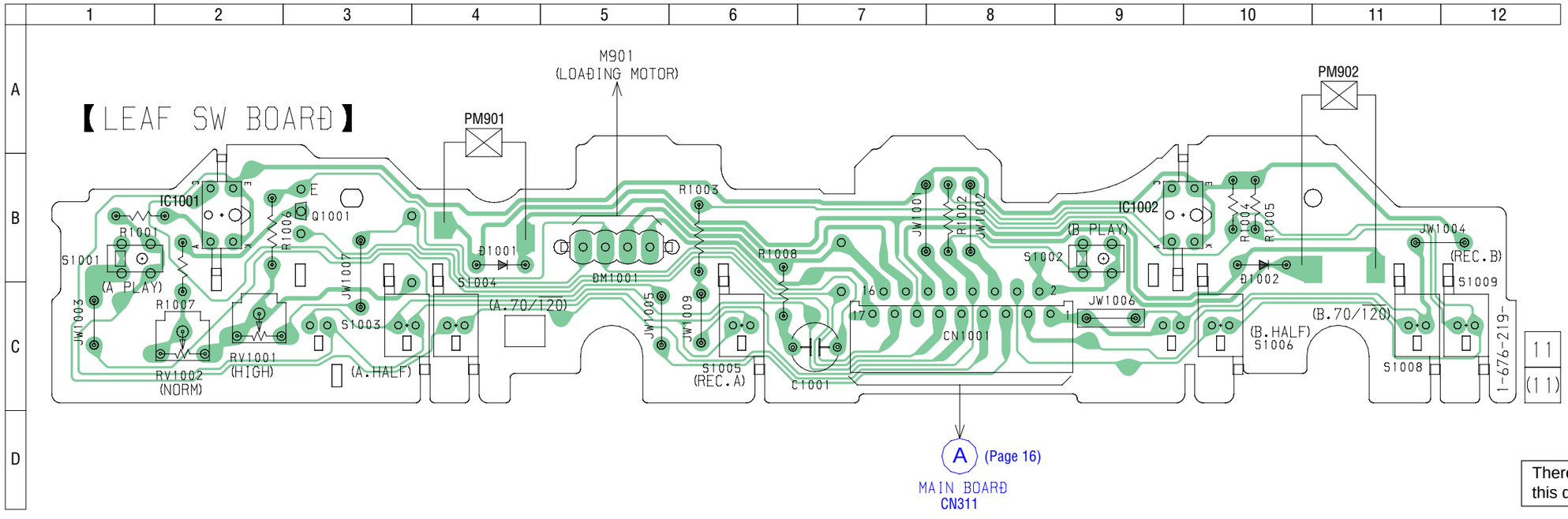
There are a few cases that the part printed on this diagram isn't mounted in this model.

7-5. SCHEMATIC DIAGRAM – LEAF SW Section –



- Voltages are dc with respect to ground under no-signal conditions.
  no mark : TAPE PLAY
  ( ) : TAPE REC

7-6. PRINTED WIRING BOARD – LEAF SW Section – • See page 13 for Circuit Boards Location.

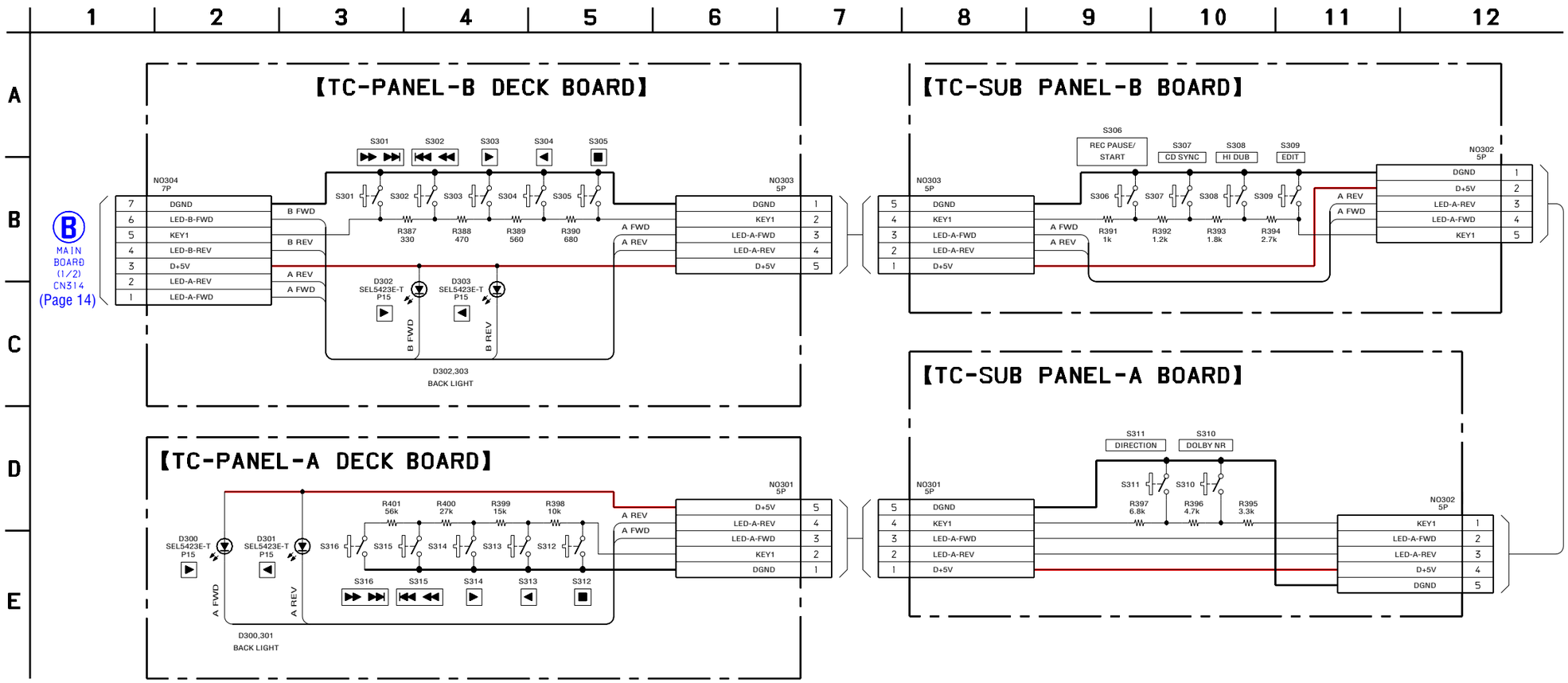


- **Semiconductor Location**

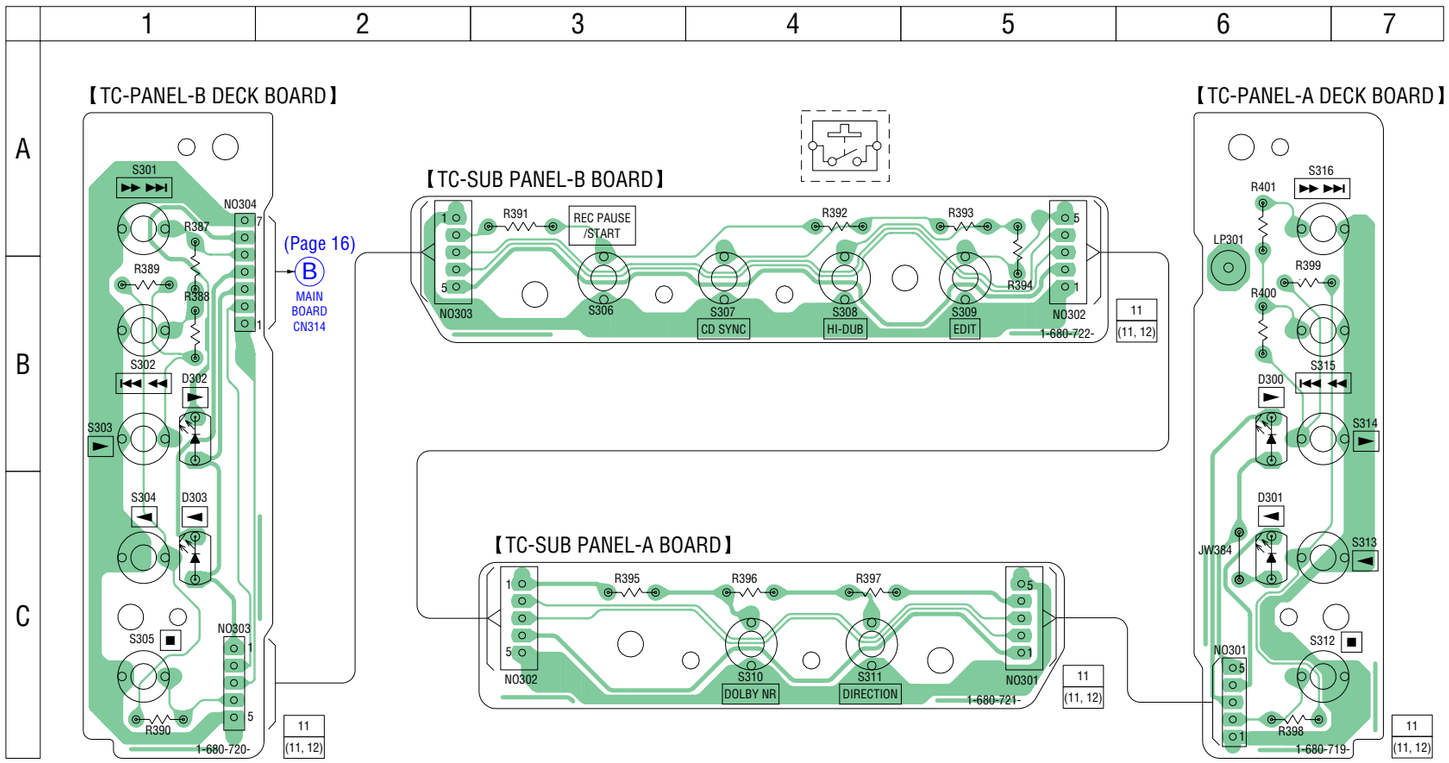
Ref. No.	Location
D1001	B-4
D1002	B-10
IC1001	B-2
IC1002	B-9
Q1001	B-3

There are a few cases that the part printed on this diagram isn't mounted in this model.

7-7. SCHEMATIC DIAGRAM – PANEL Section –



7-8. PRINTED WIRING BOARDS – PANEL Section – • See page 13 for Circuit Boards Location.



- **Semiconductor Location**

Ref. No.	Location
D300	B-6
D301	C-6
D302	B-1
D303	C-1

7-9. IC PIN FUNCTION DESCRIPTION

• MAIN BOARD IC310 PT8300-S (SYSTEM CONTROL)

Pin No.	Pin Name	I/O	Description
1	VSS	—	Ground terminal
2	RESET_B	I	Reset signal input terminal Not used
3	CLK	I	Serial data transfer clock signal input from the CD player section (CDP-S3)
4	LATCH	I	Serial data latch pulse signal input from the CD palyer section (CDP-S3)
5 – 8	P15 – P12	I	Not used (fixed at “L”)
9	P11	I	AMS signal input terminal “L”: AMS in
10	P10	I	Detection input from the deck-A half detect switch “H”: cassette in, “L”: no cassette
11	P9	I	Detection input from the deck-B play detect switch “H”: deck-B play
12	P8	I	Detection input from the deck-A play detect switch “H”: deck-A play
13	LATCHO	O	Serial data latch pulse output to the PT8300-S (IC311)
14	CLKO	O	Serial data transfer clock signal output to the PT8300-S (IC311)
15	DO1	O	Serial data output to the PT8300-S (IC311)
16	DI2	I	Serial data input from the PT8300-S (IC311)
17	P7	O	Tape deck relay on/off control signal output to the μPC1330H (IC302)
18	P6	O	ALC on/off control signal output to the HA12226F (IC301)
19	P5	O	Deck-A/B selection signal output to the HA12226F (IC301)
20	P4	O	EQ high/normal selection signal output to the HA12226F (IC301)
21	P3	O	Recording bias on/off control signal output to the HA12226F (IC301)
22	P2	O	Recording muting on/off control signal output to the HA12226F (IC301)
23	P1	O	Dolby NR on/off selection signal output to the HA12226F (IC301)
24	P0	O	Tape deck line muting on/off control output to the HA12226F (IC301)
25	DO2	O	Serial data output to the CD player section (CDP-S3)
26	DI1	I	Serial data input from the CD player section (CDP-S3)
27	PULLUP	I	P8 to P15 Control pin for pull-up resisitor (fixed at “L”)
28	VCC	—	Power supply terminal (+5V)

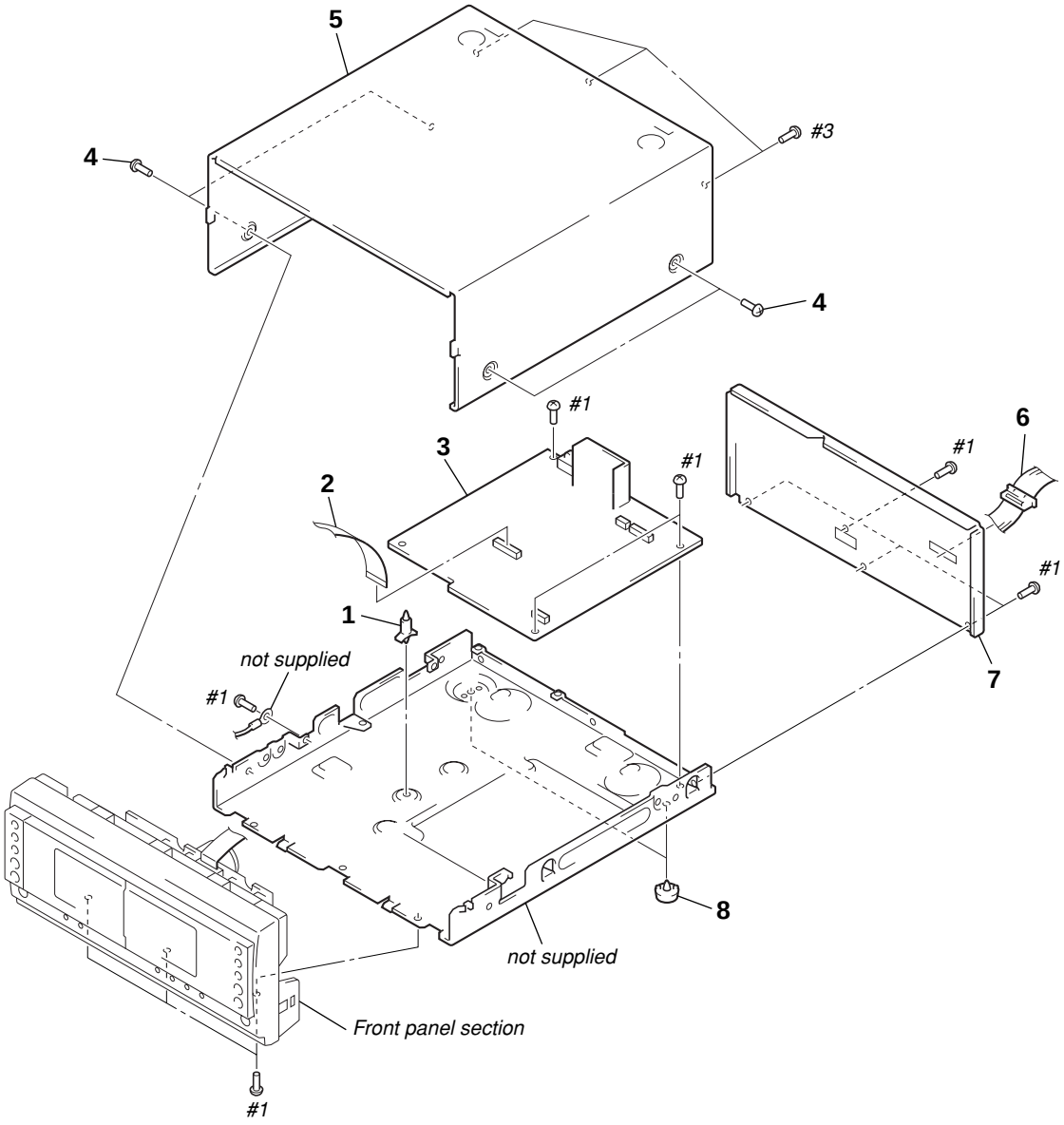
• **MAIN BOARD IC311 PT8300-S (LED DRIVE, MOTOR DRIVER)**

Pin No.	Pin Name	I/O	Description
1	VSS	—	Ground terminal
2	RESET_B	I	Reset signal input terminal Nor used
3	CLK	I	Serial data transfer clock signal input from the PT8300-S (IC310)
4	LATCH	I	Serial data latch pulse input from the PT8300-S (IC310)
5	P15	O	Not used (connected to pin ⑥)
6	P14	O	LED drive signal output of the B-FWD indicator (D302) “L”: LED on
7	P13	O	Not used (connected to pin ⑧)
8	P12	O	LED drive signal output of the B-REV indicator (D303) “L”: LED on
9	P11	O	Not used (connected to pin ⑩)
10	P10	O	LED drive signal output of the A-REV indicator (D301) “L”: LED on
11	P9	O	Not used (connected to pin ⑫)
12	P8	O	LED drive signal output of the A-FWD indicator (D300) “L”: LED on
13	LATCHO	O	Not used (open)
14	CLKO	O	Not used (open)
15	DO1	O	Not used (open)
16	DI2	I	Not used (fixed at “L”)
17 – 21	P7 – P3	O	Not used (open)
22	P2	O	Not used (connected to pin ㉓)
23	P1	O	Capstan motor on/off control signal output terminal “H”: motor on
24	P0	O	High/normal speed selection signal output of the capstan motor “H”: normal speed, “L”: high speed
25	DO2	O	Serial data output to the PT8300-S (IC310)
26	DI1	I	Serial data input from the PT8300-S (IC310)
27	PULLUP	I	P8 to P15 Control pin for Pull-up resistor (fixed at “L”)
28	VCC	—	Power supply terminal (+5V)

SECTION 8
EXPLODED VIEWS

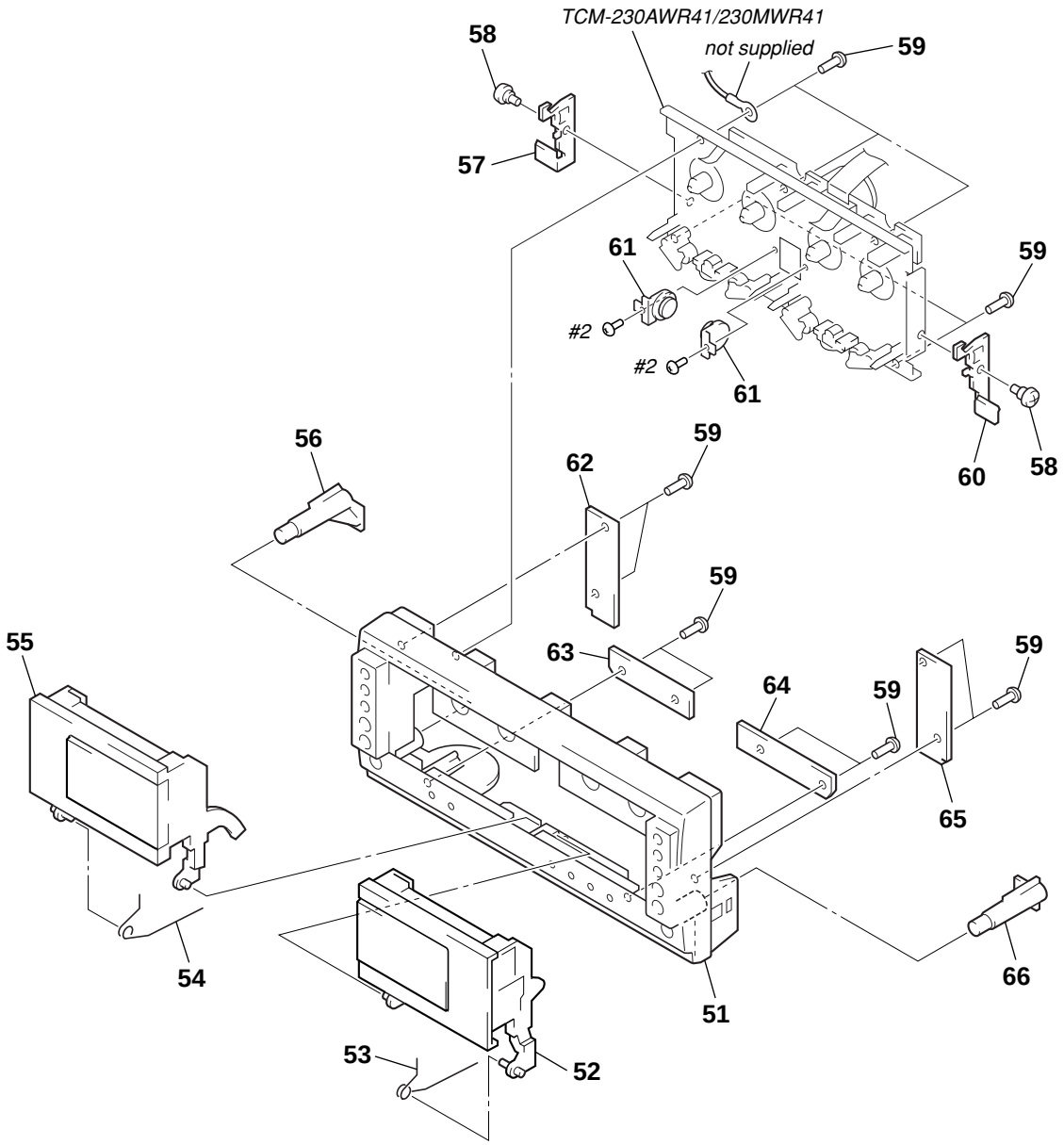
NOTE:
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts
  Example:
  KNOB, BALANCE (WHITE) . . . (RED)
  ↑ ↑
  Parts Color Cabinet's Color
- Abbreviation
  AUS : Australian model MX : Mexican model
  EA : Saudi Arabia model SP : Singapore model
  KR : korean model TH : Thailand model
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list is given in the last of the electrical parts list.

8-1. GENERAL SECTION



Ref. No.	Part No.	Description	Remark
* 1	4-924-098-01	HOLDER, PC BOARD	
2	1-773-048-11	WIRE (FLAT TYPE) (17 CORE)	
3	A-2007-873-A	MAIN BOARD, COMPLETE (EXCEPT TH)	
3	A-4725-734-A	MAIN BOARD, COMPLETE (TH)	
4	3-363-099-21	SCREW (CASE 3 TP2)	
5	4-232-336-31	COVER	
6	1-757-632-11	CORD (WITH CONNECTOR) 15P	
7	4-233-093-01	PANEL (TC), BACK (AEP, UK)	
7	4-233-093-11	PANEL (TC), BACK (AUS, EA, KR)	
7	4-233-093-21	PANEL (TC), BACK (SP)	
7	4-233-093-31	PANEL (TC), BACK (MX, TH)	
8	4-965-822-01	FOOT	

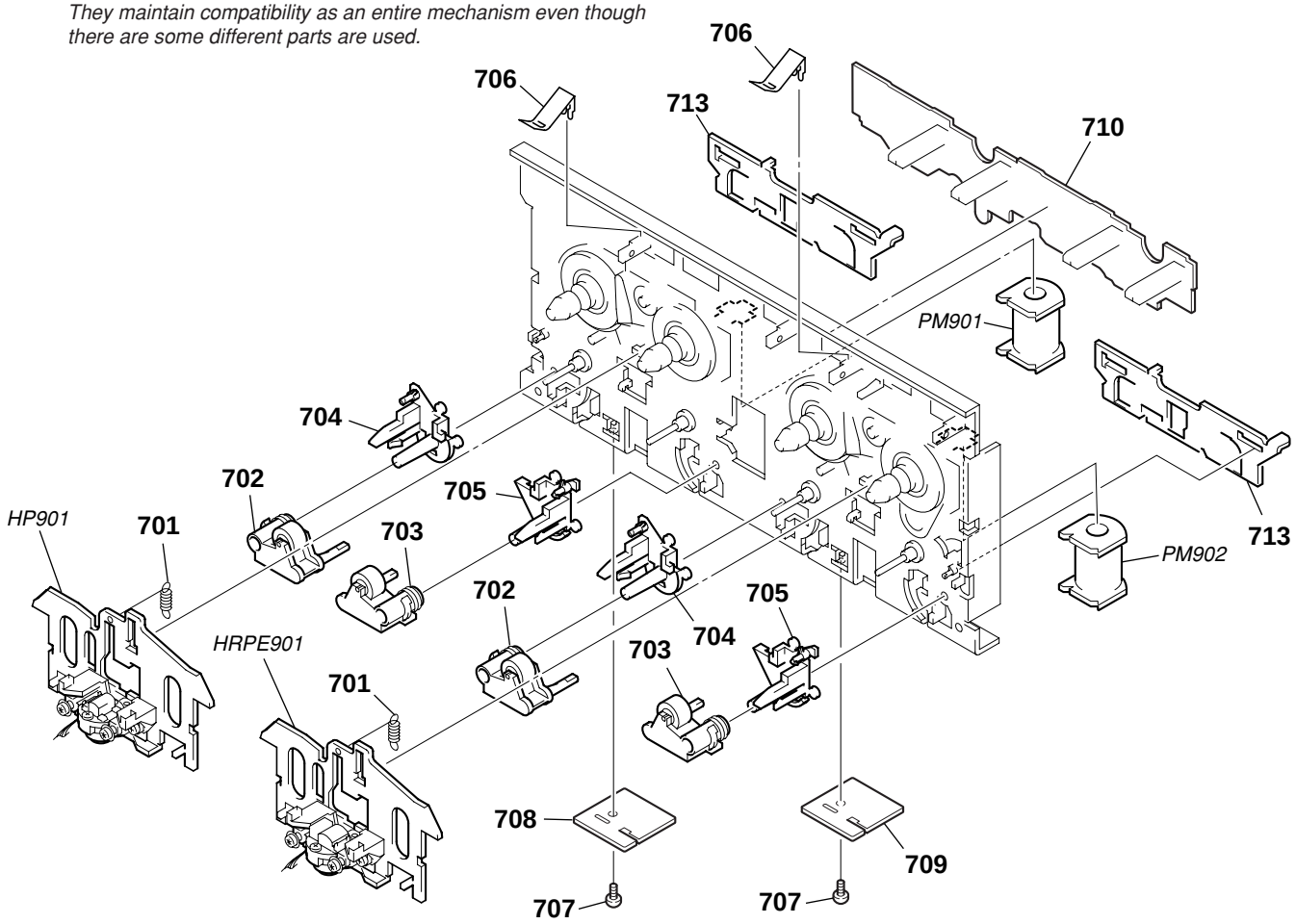
8-2. FRONT PANEL SECTION



Ref. No.	Part No.	Description	Remark
51	X-4953-607-1	PANEL ASSY, FRONT	
52	X-4953-606-1	HOLDER (R) ASSY, CASSETTE	
53	4-233-091-01	SPRING (R), TORSION	
54	4-233-090-01	SPRING (L), TORSION	
55	X-4953-605-1	HOLDER (L) ASSY, CASSETTE	
56	4-233-094-01	EJECT (L), BUTTON	
57	4-900-888-01	EJECT (LEVER-L)	
58	3-019-456-11	SCREW, STEP	
59	4-951-620-01	SCREW (2.6X8), +BVTP	
60	4-900-889-01	EJECT (LEVER-R)	
61	4-215-062-01	DAMPER	
62	1-680-719-11	TC-PANEL-A DECK BOARD	
63	1-680-721-11	TC-SUB PANEL-A BOARD	
64	1-680-722-11	TC-SUB PANEL-B BOARD	
65	1-680-720-11	TC-PANEL-B DECK BOARD	
66	4-233-095-01	EJECT (R), BUTTON	

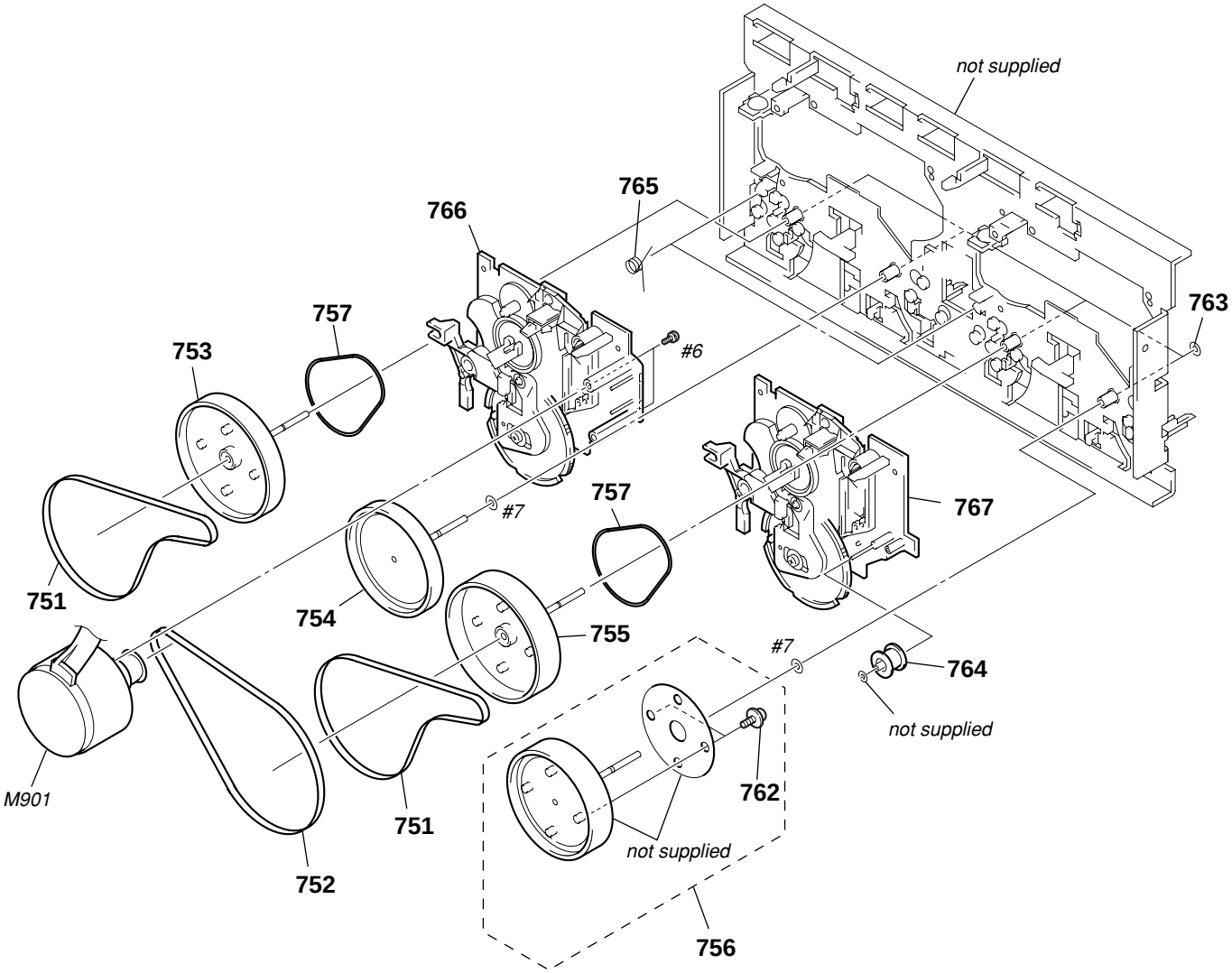
8-3. TAPE MECHANISM DECK SECTION-1 (TCM-230AWR41/230MWR41)

Note: *Two different types of tape mechanism are used depending on models. They maintain compatibility as an entire mechanism even though there are some different parts are used.*



Ref. No.	Part No.	Description	Remark
701	3-016-574-11	SPRING (HEAD), TENSION	
702	3-016-565-01	BASE (PINCH LEVER REV)	
703	3-016-564-01	BASE (PINCH LEVER FWD)	
704	X-3374-156-4	PINCH LEVER (REV) ASSY	
705	X-3374-155-4	PINCH LEVER (FWD) ASSY	
706	4-229-083-01	SPRING (CASSETTE), LEAF	
707	4-227-872-11	SCREW (+PTT 2X4), GROUND POINT	
708	1-676-220-11	HEAD (A) BOARD	
709	1-676-221-11	HEAD (B) BOARD	
710	A-2007-838-A	LEAF SW BOARD, COMPLETE	
713	3-016-566-01	SLIDER, REVERSE	
HP901	A-2004-771-A	BASE (A) ASSY, HEAD	
HRPE901	A-2004-772-A	BASE (B) ASSY, HEAD	
PM901	1-454-887-32	SOLENOID, PLUNGER	
PM902	1-454-887-32	SOLENOID, PLUNGER	

8-4. TAPE MECHANISM DECK SECTION-2 (TCM-230AWR41/230MWR41)



Ref. No.	Part No.	Description	Remark
751	3-041-946-01	BELT (CAPSTAN B)	
752	4-227-239-01	BELT (CAPSTAN C)	
753	X-3378-042-1	FLYWHEEL (B-FWD) ASSY	
754	X-3378-043-1	FLYWHEEL (B-REV) ASSY	
755	X-3378-040-1	FLYWHEEL (A-FWD) ASSY	
756	X-3378-041-1	FLYWHEEL (A-REV) ASSY	
757	3-041-947-01	BELT (FR)	

Ref. No.	Part No.	Description	Remark
762	3-318-203-62	SCREW (B1.7X4), TAPPING	
763	3-019-208-01	WASHER, STOPPER	
764	3-040-580-11	PULLEY (TENSION)	
765	4-228-450-11	SPRING (REVERSE SLIDER), TORSION	
766	A-2004-793-A	CHASSIS (A) ASSY, SUB	
767	A-2004-794-A	CHASSIS (B) ASSY, SUB	
M901	X-3378-241-1	MOTOR ASSY (CAPSTAN)	

SECTION 9
ELECTRICAL PARTS LIST

HEAD (A) | HEAD (B) | LEAF SW | MAIN

NOTE:
- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL: Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F: nonflammable
- Abbreviation
  TH : Thailand model
- Items marked "*" are not stocked since they are seldom required for routine service.
  Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u: µ, for example:
  uA. . : µA. . uPA. . : µPA. .
  uPB. . : µPB. . uPC. . : µPC. .
  uPD. . : µPD. .
- CAPACITORS
  uF: µF
- COILS
  uH: µH

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description			Remark
	1-676-220-11	HEAD (A) BOARD			
		**********			
		< CONNECTOR >			
* CN1	1-564-719-11	PIN, CONNECTOR (SMALL TYPE) 3P			
**********					
	1-676-221-11	HEAD (B) BOARD			
		**********			
		< CONNECTOR >			
CN2	1-564-722-11	PIN, CONNECTOR (SMALL TYPE) 6P			
**********					
	A-2007-838-A	LEAF SW BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C1001	1-107-716-11	ELECT	33uF	20%	10V
		< CONNECTOR >			
CN1001	1-568-860-21	SOCKET, CONNECTOR 17P			
		< DIODE >			
D1001	8-719-911-19	DIODE 1SS133T-72			
D1002	8-719-911-19	DIODE 1SS133T-72			
		< PHOTO INTERRUPTER >			
IC1001	8-749-014-38	PHOTO INTERRUPTER SG-264			
IC1002	8-749-014-38	PHOTO INTERRUPTER SG-264			
		< TRANSISTOR >			
Q1001	8-729-029-56	TRANSISTOR	DTA144ESA-TP		
		< RESISTOR >			
R907	1-247-879-11	CARBON	100K	5%	1/4W
R1001	1-249-409-11	CARBON	220	5%	1/4W
R1002	1-249-409-11	CARBON	220	5%	1/4W
R1003	1-249-414-11	CARBON	560	5%	1/4W
R1004	1-247-834-11	CARBON	1.3K	5%	1/4W
R1005	1-247-818-11	CARBON	300	5%	1/4W
R1006	1-247-864-11	CARBON	24K	5%	1/4W
R1007	1-247-780-00	CARBON	7.5	5%	1/4W
R1008	1-249-417-11	CARBON	1K	5%	1/4W
		< VARIABLE RESISTOR >			
RV1001	1-241-785-11	RES, ADJ, CARBON 10K			
RV1002	1-241-785-11	RES, ADJ, CARBON 10K			
		< SWITCH >			
S1001	1-570-953-11	SWITCH, PUSH (1 KEY) (A PLAY)			
S1002	1-570-953-11	SWITCH, PUSH (1 KEY) (B PLAY)			
S1003	1-771-333-11	SWITCH, LEAF (A.HALF)			
S1004	1-771-205-11	SWITCH, LEAF (A.$\overline{120}$/70)			
S1005	1-771-205-11	SWITCH, LEAF (REC.A)			
S1006	1-771-333-11	SWITCH, LEAF (B.HALF)			
S1008	1-771-205-11	SWITCH, LEAF (B.$\overline{120}$/70)			
S1009	1-771-205-11	SWITCH, LEAF (REC.B)			
**********					
	A-2007-873-A	MAIN BOARD, COMPLETE (EXCEPT TH)			
	A-4725-734-A	MAIN BOARD, COMPLETE (TH)			
		**********			
	7-685-646-79	SCREW +BVTP	3X8	TYPE2 N-S	
		< CAPACITOR >			
C301	1-126-960-11	ELECT	1uF	20%	50V
C302	1-130-479-00	MYLAR	0.0047uF	5%	50V
C303	1-136-165-00	FILM	0.1uF	5%	50V
C304	1-136-165-00	FILM	0.1uF	5%	50V
C305	1-126-959-11	ELECT	0.47uF	20%	50V
C306	1-126-960-11	ELECT	1uF	20%	50V
C307	1-126-960-11	ELECT	1uF	20%	50V
C308	1-126-964-11	ELECT	10uF	20%	50V
C309	1-137-194-11	FILM	0.47uF	5%	50V
C310	1-162-290-31	CERAMIC	470PF	10%	50V
C311	1-126-964-11	ELECT	10uF	20%	50V
C312	1-126-959-11	ELECT	0.47uF	20%	50V
C313	1-162-294-31	CERAMIC	0.001uF	10%	50V
C314	1-126-964-11	ELECT	10uF	20%	50V
C315	1-126-963-11	ELECT	4.7uF	20%	50V
C316	1-126-933-11	ELECT	100uF	20%	16V
C317	1-104-665-11	ELECT	100uF	20%	10V
C318	1-126-964-11	ELECT	10uF	20%	50V
C319	1-126-961-11	ELECT	2.2uF	20%	50V
C320	1-126-961-11	ELECT	2.2uF	20%	50V

MAIN

Ref. No.	Part No.	Description			Remark
C321	1-162-289-31	CERAMIC	390PF	10%	50V
C322	1-162-282-31	CERAMIC	100PF	10%	50V
C323	1-136-157-00	FILM	0.022uF	5%	50V
C324	1-126-933-11	ELECT	100uF	20%	16V
C326	1-162-289-31	CERAMIC	390PF	10%	50V
C327	1-104-665-11	ELECT	100uF	20%	10V
C328	1-162-282-31	CERAMIC	100PF	10%	50V
C329	1-136-153-00	FILM	0.01uF	5%	50V
C330	1-126-933-11	ELECT	100uF	20%	16V
C332	1-162-283-31	CERAMIC	120PF	10%	50V
C333	1-162-288-31	CERAMIC	330PF	10%	50V
C334	1-162-209-31	CERAMIC	27PF	5%	50V
C335	1-137-150-11	MYLAR	0.01uF	5%	100V
C336	1-126-961-11	ELECT	2.2uF	20%	50V
C337	1-136-155-00	FILM	0.015uF	5%	50V
C338	1-130-481-00	MYLAR	0.0068uF	5%	50V
C339	1-130-481-00	MYLAR	0.0068uF	5%	50V
C340	1-136-156-00	FILM	0.018uF	5%	50V
C341	1-126-960-11	ELECT	1uF	20%	50V
C342	1-104-660-11	ELECT	47uF	20%	16V
C343	1-164-159-11	CERAMIC	0.1uF		50V
C344	1-164-159-11	CERAMIC	0.1uF		50V
C345	1-164-159-11	CERAMIC	0.1uF		50V
C346	1-164-159-11	CERAMIC	0.1uF		50V
C347	1-126-964-11	ELECT	10uF	20%	50V
C348	1-164-159-11	CERAMIC	0.1uF		50V
C349	1-126-964-11	ELECT	10uF	20%	50V
C350	1-126-964-11	ELECT	10uF	20%	50V
C351	1-126-960-11	ELECT	1uF	20%	50V
C352	1-130-479-00	MYLAR	0.0047uF	5%	50V
C353	1-136-165-00	FILM	0.1uF	5%	50V
C354	1-136-165-00	FILM	0.1uF	5%	50V
C355	1-126-959-11	ELECT	0.47uF	20%	50V
C356	1-126-960-11	ELECT	1uF	20%	50V
C357	1-126-960-11	ELECT	1uF	20%	50V
C358	1-126-964-11	ELECT	10uF	20%	50V
C359	1-137-194-11	FILM	0.47uF	5%	50V
C360	1-162-290-31	CERAMIC	470PF	10%	50V
C362	1-130-479-00	MYLAR	0.0047uF	5%	50V
C363	1-130-479-00	MYLAR	0.0047uF	5%	50V
C367	1-162-294-31	CERAMIC	0.001uF	10%	50V
C368	1-126-964-11	ELECT	10uF	20%	50V
C369	1-126-961-11	ELECT	2.2uF	20%	50V
C370	1-126-961-11	ELECT	2.2uF	20%	50V
C371	1-162-289-31	CERAMIC	390PF	10%	50V
C372	1-162-282-31	CERAMIC	100PF	10%	50V
C373	1-136-157-00	FILM	0.022uF	5%	50V
C374	1-126-933-11	ELECT	100uF	20%	16V
C376	1-162-289-31	CERAMIC	390PF	10%	50V
C377	1-104-665-11	ELECT	100uF	20%	10V
C378	1-162-282-31	CERAMIC	100PF	10%	50V
C379	1-136-153-00	FILM	0.01uF	5%	50V
C380	1-126-933-11	ELECT	100uF	20%	16V
C382	1-162-283-31	CERAMIC	120PF	10%	50V
C383	1-162-288-31	CERAMIC	330PF	10%	50V
C384	1-162-209-31	CERAMIC	27PF	5%	50V
C385	1-104-665-11	ELECT	100uF	20%	10V
C386	1-104-665-11	ELECT	100uF	20%	10V
C388	1-126-964-11	ELECT	10uF	20%	50V
C389	1-126-935-11	ELECT	470uF	20%	16V
C390	1-126-964-11	ELECT	10uF	20%	50V
C391	1-126-935-11	ELECT	470uF	20%	16V
C394	1-126-964-11	ELECT	10uF	20%	50V
C395	1-126-964-11	ELECT	10uF	20%	50V
C396	1-162-282-31	CERAMIC	100PF	10%	50V
C397	1-162-282-31	CERAMIC	100PF	10%	50V
C398	1-162-282-31	CERAMIC	100PF	10%	50V
C399	1-162-282-31	CERAMIC	100PF	10%	50V
C414	1-126-964-11	ELECT	10uF	20%	50V
C415	1-126-935-11	ELECT	470uF	20%	10V
C417	1-164-159-11	CERAMIC	0.1uF		50V
C418	1-164-159-11	CERAMIC	0.1uF		50V
		< CONNECTOR >			
* CN308	1-566-856-11	SOCKET, CONNECTOR 5P			(SYSTEM CONTROL 4)
CN309	1-794-569-11	PIN, CONNECTOR 5P (SYSTEM CONTROL 5)			
CN310	1-580-176-11	PIN, CONNECTOR 10P (SYSTEM CONTROL 5)			
CN311	1-784-778-11	CONNECTOR, FFC 17P			
* CN314	1-568-934-11	PIN, CONNECTOR 7P			
		< DIODE >			
D306	8-719-024-99	DIODE 11ES2-NTA2B (EXCEPT TH)			
D306	8-719-200-82	DIODE 11ES2-NTA1B (TH)			
D307	8-719-024-99	DIODE 11ES2-NTA2B (EXCEPT TH)			
D307	8-719-200-82	DIODE 11ES2-NTA1B (TH)			
D308	8-719-024-99	DIODE 11ES2-NTA2B (EXCEPT TH)			
D308	8-719-200-82	DIODE 11ES2-NTA1B (TH)			
D309	8-719-024-99	DIODE 11ES2-NTA2B (EXCEPT TH)			
D309	8-719-200-82	DIODE 11ES2-NTA1B (TH)			
		< GROUND TERMINAL>			
* EPT300	1-537-738-21	TERMINAL, EARTH			
* EPT302	1-537-738-21	TERMINAL, EARTH			
		< IC >			
IC301	8-759-652-02	IC HA12226F			
IC302	8-759-143-54	IC uPC1330HA			
IC303	8-759-710-59	IC NJM4580D-D			
IC304	8-759-710-59	IC NJM4580D-D			
IC310	6-800-467-01	IC PT8300-S			
IC311	6-800-467-01	IC PT8300-S			
IC320	8-759-394-35	IC BA12T			
IC321	8-759-701-59	IC NJM7809FA			
		< COIL >			
L301	1-410-780-11	INDUCTOR	27uH		
L302	1-414-193-41	INDUCTOR	220uH		
L303	1-414-193-41	INDUCTOR	220uH		
L351	1-410-780-11	INDUCTOR	27uH		
		< TRANSISTOR >			
Q301	8-729-801-93	TRANSISTOR	2SD1387-34-TP		
Q302	8-729-142-46	TRANSISTOR	2SC2001TP-LK		
Q303	8-729-142-46	TRANSISTOR	2SC2001TP-LK		

MAIN

Ref. No.	Part No.	Description			Remark
Q304	8-729-422-57	TRANSISTOR	BN1A4M-TP		
Q305	8-729-900-80	TRANSISTOR	BA1A4M-TP		
Q310	8-729-119-78	TRANSISTOR	2SC2785TP-HFE		
Q391	8-729-140-04	TRANSISTOR	2SB1116-TP-LK		
Q392	8-729-900-80	TRANSISTOR	BA1A4M-TP		
Q393	8-729-140-04	TRANSISTOR	2SB1116-TP-LK		
Q394	8-729-900-80	TRANSISTOR	BA1A4M-TP		
Q395	8-729-900-80	TRANSISTOR	BA1A4M-TP		
Q396	8-729-801-93	TRANSISTOR	2SD1387-34-TP		
Q400	8-729-142-46	TRANSISTOR	2SC2001TP-LK		
		< RESISTOR >			
R300	1-249-433-11	CARBON	22K	5% 1/4W	
R301	1-249-421-11	CARBON	2.2K	5% 1/4W	
R302	1-247-807-31	CARBON	100	5% 1/4W	
R303	1-247-807-31	CARBON	100	5% 1/4W	
R304	1-249-427-11	CARBON	6.8K	5% 1/4W	
R305	1-249-429-11	CARBON	10K	5% 1/4W	
R306	1-249-430-11	CARBON	12K	5% 1/4W	
R307	1-247-843-11	CARBON	3.3K	5% 1/4W	
R308	1-249-433-11	CARBON	22K	5% 1/4W	
R309	1-247-903-00	CARBON	1M	5% 1/4W	
R310	1-247-884-11	CARBON	160K	5% 1/4W	
R311	1-249-441-11	CARBON	100K	5% 1/4W	
R313	1-249-429-11	CARBON	10K	5% 1/4W	
R314	1-249-435-11	CARBON	33K	5% 1/4W	
R315	1-249-429-11	CARBON	10K	5% 1/4W	
R316	1-249-429-11	CARBON	10K	5% 1/4W	
R317	1-247-893-11	CARBON	390K	5% 1/4W	
R318	1-249-418-11	CARBON	1.2K	5% 1/4W	
R319	1-249-425-11	CARBON	4.7K	5% 1/4W	
R321	1-249-430-11	CARBON	12K	5% 1/4W	
R322	1-249-437-11	CARBON	47K	5% 1/4W	
R323	1-249-425-11	CARBON	4.7K	5% 1/4W	
R324	1-249-429-11	CARBON	10K	5% 1/4W	
R325	1-249-437-11	CARBON	47K	5% 1/4W	
R327	1-249-425-11	CARBON	4.7K	5% 1/4W	
R328	1-249-437-11	CARBON	47K	5% 1/4W	
R330	1-247-881-00	CARBON	120K	5% 1/4W	
R331	1-247-807-31	CARBON	100	5% 1/4W	
R332	1-249-426-11	CARBON	5.6K	5% 1/4W	
R333	1-247-882-11	CARBON	130K	5% 1/4W	
R334	1-249-409-11	CARBON	220	5% 1/4W	
R335	1-247-881-00	CARBON	120K	5% 1/4W	
R336	1-249-409-11	CARBON	220	5% 1/4W	
R337	1-249-433-11	CARBON	22K	5% 1/4W	
R338	1-249-430-11	CARBON	12K	5% 1/4W	
R339	1-247-889-00	CARBON	270K	5% 1/4W	
R340	1-249-409-11	CARBON	220	5% 1/4W	
R341	1-249-430-11	CARBON	12K	5% 1/4W	
⚠R342	1-212-851-00	FUSIBLE	5.6	5% 1/4W	F
⚠R343	1-212-851-00	FUSIBLE	5.6	5% 1/4W	F
R344	1-249-432-11	CARBON	18K	5% 1/4W	
R345	1-249-432-11	CARBON	18K	5% 1/4W	
R346	1-249-426-11	CARBON	5.6K	5% 1/4W	
R347	1-249-433-11	CARBON	22K	5% 1/4W	
R348	1-249-409-11	CARBON	220	5% 1/4W	
R349	1-249-425-11	CARBON	4.7K	5% 1/4W	
R350	1-249-433-11	CARBON	22K	5% 1/4W	
R351	1-249-421-11	CARBON	2.2K	5% 1/4W	
R354	1-249-427-11	CARBON	6.8K	5% 1/4W	
R355	1-249-429-11	CARBON	10K	5% 1/4W	
R356	1-249-430-11	CARBON	12K	5% 1/4W	
R357	1-247-843-11	CARBON	3.3K	5% 1/4W	
R358	1-249-435-11	CARBON	33K	5% 1/4W	
R359	1-249-417-11	CARBON	1K	5% 1/4W	
R360	1-249-417-11	CARBON	1K	5% 1/4W	
R361	1-249-417-11	CARBON	1K	5% 1/4W	
R362	1-249-417-11	CARBON	1K	5% 1/4W	
R363	1-249-437-11	CARBON	47K	5% 1/4W	
R364	1-249-417-11	CARBON	1K	5% 1/4W	
R367	1-249-417-11	CARBON	1K	5% 1/4W	
R368	1-249-418-11	CARBON	1.2K	5% 1/4W	
R369	1-249-413-11	CARBON	470	5% 1/4W	
R370	1-247-881-00	CARBON	120K	5% 1/4W	
R371	1-247-807-31	CARBON	100	5% 1/4W	
R372	1-249-426-11	CARBON	5.6K	5% 1/4W	
R373	1-247-882-11	CARBON	130K	5% 1/4W	
R375	1-247-881-00	CARBON	120K	5% 1/4W	
R376	1-249-409-11	CARBON	220	5% 1/4W	
R377	1-249-433-11	CARBON	22K	5% 1/4W	
R378	1-249-430-11	CARBON	12K	5% 1/4W	
R379	1-247-889-00	CARBON	270K	5% 1/4W	
R386	1-249-410-11	CARBON	270	5% 1/4W	
R402	1-249-419-11	CARBON	1.5K	5% 1/4W	
R403	1-249-416-11	CARBON	820	5% 1/4W	
R404	1-249-419-11	CARBON	1.5K	5% 1/4W	
R405	1-249-416-11	CARBON	820	5% 1/4W	
R406	1-247-807-31	CARBON	100	5% 1/4W	
R407	1-247-807-31	CARBON	100	5% 1/4W	
R408	1-247-807-31	CARBON	100	5% 1/4W	
R409	1-247-807-31	CARBON	100	5% 1/4W	
R412	1-247-807-31	CARBON	100	5% 1/4W	
R413	1-247-807-31	CARBON	100	5% 1/4W	
R414	1-247-807-31	CARBON	100	5% 1/4W	
R415	1-247-807-31	CARBON	100	5% 1/4W	
R416	1-247-807-31	CARBON	100	5% 1/4W	
R417	1-247-807-31	CARBON	100	5% 1/4W	
R418	1-249-414-11	CARBON	560	5% 1/4W	
R419	1-249-417-11	CARBON	1K	5% 1/4W	
R420	1-249-409-11	CARBON	220	5% 1/4W	
R421	1-249-409-11	CARBON	220	5% 1/4W	
R422	1-249-409-11	CARBON	220	5% 1/4W	
R423	1-249-409-11	CARBON	220	5% 1/4W	
		< VARIABLE RESISTOR >			
RV301	1-241-764-11	RES, ADJ, CARBON 10K			
RV302	1-241-762-11	RES, ADJ, CARBON 2.2K			
RV303	1-241-762-11	RES, ADJ, CARBON 2.2K			
RV304	1-241-768-11	RES, ADJ, CARBON 220K			
RV351	1-241-764-11	RES, ADJ, CARBON 10K			
RV354	1-241-768-11	RES, ADJ, CARBON 220K			

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description			Remark
		< TRANSFORMER >			
T301	1-423-980-11	TRANSFORMER, BIAS OSCILLATION			
**********					
	1-680-719-11	TC-PANEL-A DECK BOARD			
		**********			
		< LED >			
D300	8-719-058-03	LED SEL5423E-TP15 (►)			
D301	8-719-058-03	LED SEL5423E-TP15 (◄)			
		< RESISTOR >			
R398	1-249-429-11	CARBON	10K	5%	1/4W
R399	1-249-431-11	CARBON	15K	5%	1/4W
R400	1-249-434-11	CARBON	27K	5%	1/4W
R401	1-249-438-11	CARBON	56K	5%	1/4W
		< SWITCH >			
S312	1-771-410-21	SWITCH, TACTILE (■)			
S313	1-771-410-21	SWITCH, TACTILE (◄)			
S314	1-771-410-21	SWITCH, TACTILE (►)			
S315	1-771-410-21	SWITCH, TACTILE (I◄◄ ◄◄)			
S316	1-771-410-21	SWITCH, TACTILE (►► ►►I)			
**********					
	1-680-720-11	TC-PANEL-B DECK BOARD			
		**********			
		< LED >			
D302	8-719-058-03	LED SEL5423E-TP15 (►)			
D303	8-719-058-03	LED SEL5423E-TP15 (◄)			
		< RESISTOR >			
R387	1-249-411-11	CARBON	330	5%	1/4W
R388	1-249-413-11	CARBON	470	5%	1/4W
R389	1-249-414-11	CARBON	560	5%	1/4W
R390	1-249-415-11	CARBON	680	5%	1/4W
		< SWITCH >			
S301	1-771-410-21	SWITCH, TACTILE (►► ►►I)			
S302	1-771-410-21	SWITCH, TACTILE (I◄◄ ◄◄)			
S303	1-771-410-21	SWITCH, TACTILE (►)			
S304	1-771-410-21	SWITCH, TACTILE (◄)			
S305	1-771-410-21	SWITCH, TACTILE (■)			
**********					
	1-680-721-11	TC-SUB PANEL-A BOARD			
		**********			
		< RESISTOR >			
R395	1-247-843-11	CARBON	3.3K	5%	1/4W
R396	1-249-425-11	CARBON	4.7K	5%	1/4W
R397	1-249-427-11	CARBON	6.8K	5%	1/4W
		< SWITCH >			
S310	1-771-410-21	SWITCH, TACTILE (DOLBY NR)			
S311	1-771-410-21	SWITCH, TACTILE (DIRECTION)			
**********					

Ref. No.	Part No.	Description			Remark
	1-680-722-11	TC-SUB PANEL-B BOARD			
		**********			
		< RESISTOR >			
R391	1-249-417-11	CARBON	1K	5%	1/4W
R392	1-249-418-11	CARBON	1.2K	5%	1/4W
R393	1-249-420-11	CARBON	1.8K	5%	1/4W
R394	1-249-422-11	CARBON	2.7K	5%	1/4W
		< SWITCH >			
S306	1-771-410-21	SWITCH, TACTILE (REC PAUSE/START)			
S307	1-771-410-21	SWITCH, TACTILE (CD SYNC)			
S308	1-771-410-21	SWITCH, TACTILE (HI-DUB)			
S309	1-771-410-21	SWITCH, TACTILE (EDIT)			
**********					
		MISCELLANEOUS			
		**********			
2	1-773-048-11	WIRE (FLAT TYPE) (17 CORE)			
6	1-757-632-11	CORD (WITH CONNECTOR) 15P			
HP901	A-2004-771-A	BASE (A) ASSY, HEAD			
HRPE901	A-2004-772-A	BASE (B) ASSY, HEAD			
M901	X-3378-241-1	MOTOR ASSY (CAPSTAN)			
PM901	1-454-887-32	SOLENOID, PLUNGER			
PM902	1-454-887-32	SOLENOID, PLUNGER			
**********					
		**********			
		HARDWARE LIST			
		**********			
#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S			
#2	7-685-853-04	SCREW +BVTT 2X6 (S)			
#3	7-685-871-01	SCREW +BVTT 3X6 (S)			
#6	7-628-254-05	SCREW +PS 2.6X5			
#7	7-623-921-01	RING, RETAINING, CAPSTAN			

MEMO

REVISION HISTORY

Clicking the version allows you to jump to the revised page.
Also, clicking the version at the upper right on the revised page allows you to jump to the next revised page.

Ver.	Date	Description of Revision
1.0	2001.04	New